U. S. DEPARTMENT OF LABOR
W. B. WILSON, Secretary
BUREAU OF LABOR STATISTICS
ETHELBERT STEWART, Commissioner

MONTHLY
LABOR REVIEW

Vol. XI, No. 2 August, 1920

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Employment of women in France before and after the war
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A Plan for Cooperation Between Farmer and Consumer.[1]

By BENTON MACKAYE.

WHAT are the possibilities of reducing living costs by cooperation between farmer and consumer? This is a question both of cooperation and of land utilization. It involves productive as well as distributive processes. Its answer should be dependent on some specific underlying policy for converting natural resources into human requirements. Such a policy will not be considered here beyond the statement of an obvious principle, that the necessities of life should be supplied to the consumer at the lowest possible cost and on the basis of the service rendered. The particular point at hand is one of distribution rather than production, and relates to food products only. The postal motor transport service has already initiated, on a limited scale, a line of cooperation between farm producer and city consumer. To show in part the enlarged possibilities of this system is the purpose of this article.

To avoid misunderstanding, one thing should be emphasized at the start. It is by no means expected that the exact specifications for the system outlined would be carried out, in any actual case, precisely as set forth. The system is described in exact terms for the purpose of minimizing vagueness and of presenting a definite goal toward which to work.

While the specifications of the proposed system are applied to the metropolitan center of Washington, D. C., a general estimate of the possible savings which may be realized by applying this system of distribution to the country as a whole may not be out of place. But since the official statistics upon which the estimates are based are at best somewhat fragmentary, the estimates themselves must be considered as tentative only.[2]

[1] This is a summary of a report submitted to the Fourth Assistant Postmaster General. The plan herein outlined is a development of a part of the land utilization program worked out by the author for the Department of Labor and which received the indorsement of the Secretary of Labor. This plan is described in part in articles in the MONTHLY LABOR REVEIW for January, 1918 (pp. 48-56), and April, 1919 (pp. 121-139), and in full in the author's report on Employment and natural resources (Office of the Secretary, 1919).

[2] The sources of the data used in this article comprise the cost of living and price reports of the United States Bureau of Labor Statistics, but more particularly the quantity budget issued in January, 1919; the cost of production studies of the United States Department of Agriculture, Office of Farm Management; the crop reports and estimates of the same department. The production data, total for the country, and per capita, is reported annually in the Statistical Abstract of the United States; farm acreage and production, etc., are taken from the United States Bureau of the Census; and additional data along the same line were secured from reports of the United States Food Administration.

Two Systems of Distribution.

A COMPARISON of the essential factors in the present system of food distribution with those of the proposed postal system may be made by reducing each to a stereotyped pattern form based on assumptions typical of the actual conditions under which distribution takes place.

The scheme of distribution under the present system has been reduced to graphic form in Figure 1. This traces the movement of the farmer's produce from the farm to the local railway station, thence to the city terminal, from the terminal to the retail store, and the final circuit from the store to the individual families.

FIG. 1.

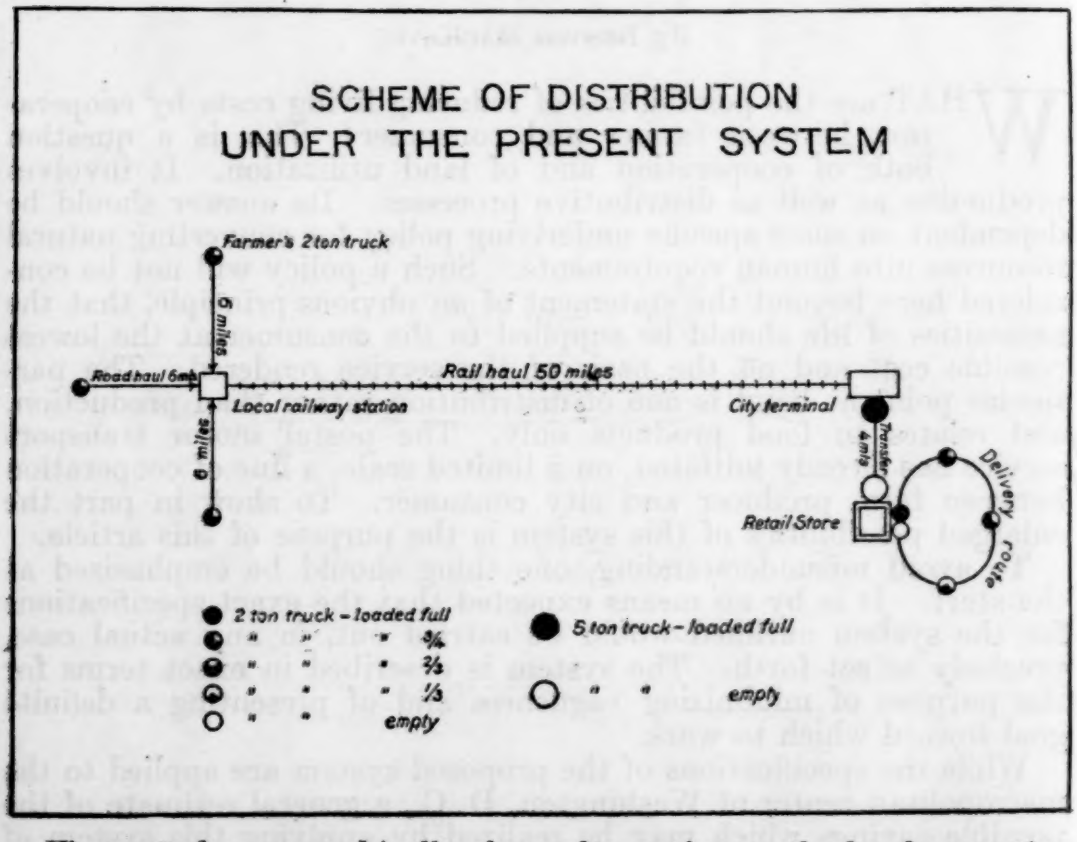
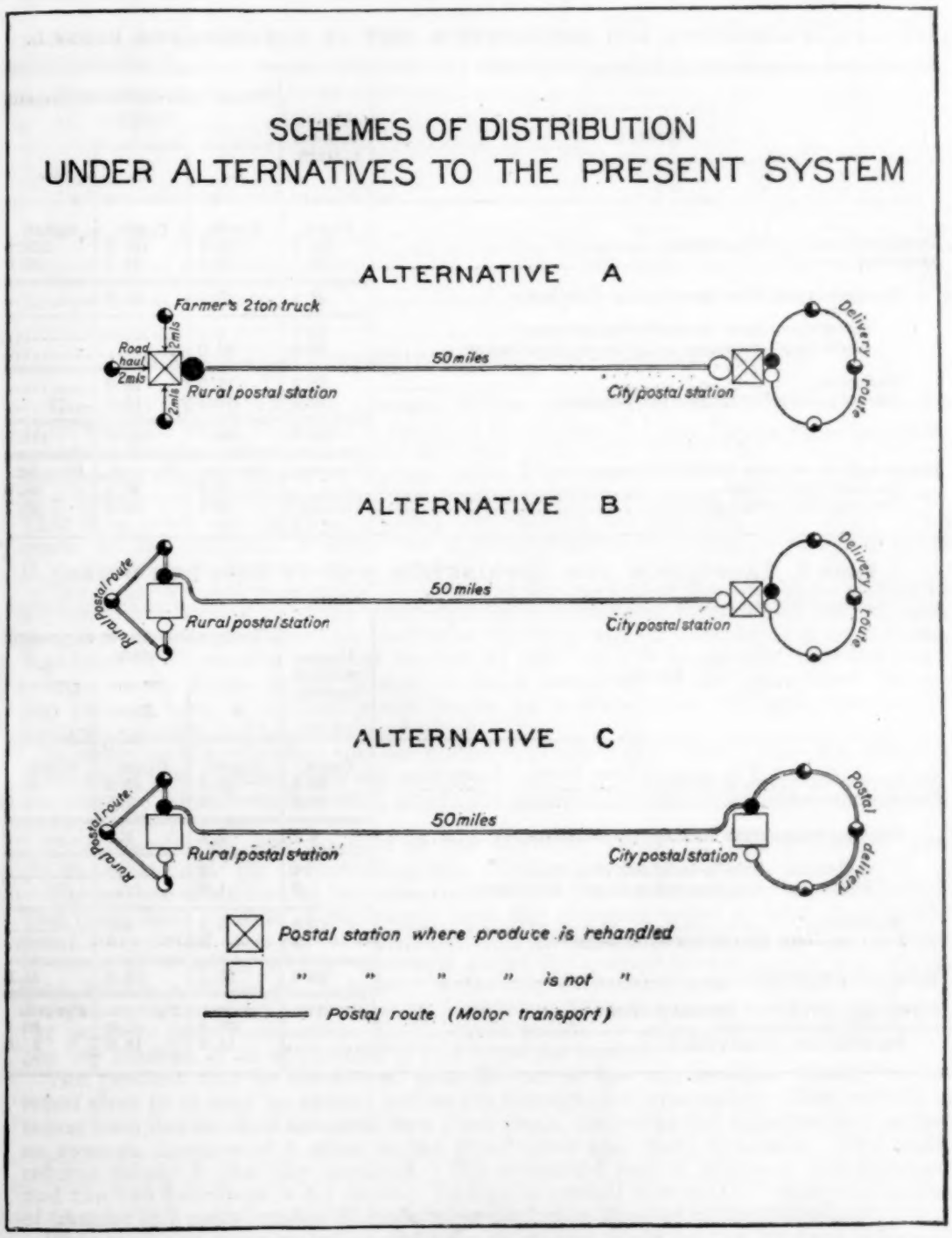


Figure 2 shows graphically three alternative methods of operating the proposed postal system of distribution. Under alternative A the farmer brings his produce to his local postal station, where it is transferred to the postal motor truck, thence carried to the city postal station, and there transferred via the final delivery route to the individual families. Under alternative B the produce is collected at the farm by the rural postal carrier and taken directly to the city postal station. Under alternative C the produce is carried by postal motor truck the entire distance without transfer, from the individual farm to the individual city family.

The costs of distribution under each system have been estimated for three staples—potatoes, eggs, and butter. By substituting

alternative C of the postal scheme for the present scheme of distribution about $1,000,000 on each staple named could presumably be saved in the annual food bill now paid by the population of Washington, D. C. The distribution cost could be reduced from 64 to 92

FIG. 2.



per cent, and the total cost (retail price) by an average of 26 per cent. But this estimated saving of 26 per cent is based on the assumption that purchases can be made in fairly large quantities—potatoes by the bushel, eggs by the crate (30 dozen), and butter in 50-pound lots.

Where, however, these products have to be shipped in smaller lots, the aggregate saving would be less.

Analysis of costs under the two systems for potatoes, eggs, and butter are given in Tables 1, 2, and 3. The method of arriving at the results shown in these tables will be given in detail only in the case of potatoes.

TABLE 1.—PRODUCTION AND DISTRIBUTION COST OF POTATOES PER BUSHEL.

Item.	Under present system.	Under alternatives to present system.		
		A.	B.	C.
	Cents.	*Cents.*	*Cents.*	*Cents.*
Production cost (price at farm)	126.9	126.9	126.9	126.9
Distribution cost	97.1	72.8	64.7	35.0
Transportation from farm to city distributor	33.1	43.1	35.0	.....
Collection—farm to local shipping point	12.5	8.1	.....	.....
Main haul—shipping point to city distributor	20.6	35.0	.....	.....
Marketing	53.3	19.0	19.0	.....
Delivery—city distributor to consumer	10.7	10.7	10.7	.....
Total cost (retail price)	224.0	199.7	191.6	161.9
Percentage saved over present system:	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
On distribution cost	.....	25.0	33.3	64.0
On total cost (retail price)	.....	10.8	14.5	27.7

TABLE 2.—PRODUCTION AND DISTRIBUTION COST OF EGGS PER DOZEN.

Item.	Under present system.	Under alternatives to present system.		
		A.	B.	C.
	Cents.	*Cents.*	*Cents.*	*Cents.*
Production cost (price at farm)	43.4	43.4	43.4	43.4
Distribution cost	19.2	7.7	7.5	1.9
Transportation from farm to city distributor	1.3	2.1	1.9	.....
Collection—farm to local shipping point	.4	.2	.....	.....
Main haul—shipping point to city distributor	.9	1.9	.....	.....
Marketing	17.6	5.3	5.3	.....
Delivery—city distributor to consumer	.3	.3	.3	.....
Total cost (retail price)	62.6	51.1	50.9	45.3
Percentage saved over present system:	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
On distribution cost	.....	60.0	61.0	90.1
On total cost (retail price)	.....	18.4	18.6	27.5

TABLE 3.—PRODUCTION AND DISTRIBUTION COST OF BUTTER PER POUND.

Item.	Under present system.	Under alternatives to present system.		
		A.	B.	C.
	Cents.	*Cents.*	*Cents.*	*Cents.*
Production cost (price at farm)	50.4	50.4	50.4	50.4
Distribution cost	17.6	7.7	7.5	1.4
Transportation from farm to city distributor	1.0	1.6	1.4	.....
Collection—farm to local shipping point	.3	.2	.....	.....
Main haul—shipping point to city distributor	.7	1.4	.....	.....
Marketing	16.3	5.8	5.8	.....
Delivery—city distributor to consumer	.3	.3	.3	.....
Total cost (retail price)	68.0	58.1	57.9	51.8
Percentage saved over present system:	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
On distribution cost	.....	56.2	57.4	92.0
On total cost (retail price)	.....	14.5	14.7	23.7

Analysis of Elements Entering Into Marketing Cost.

The retail price of potatoes, averaged for the whole United States, for the 12 months of 1919 was 224 cents, according to figures of the Bureau of Labor Statistics. The corresponding farmers' price paid at the shipping point was, on the basis of the figures of the Bureau of Crop Estimates, United States Department of Agriculture, 139.4 cents. The farm price would represent the cost of production under the present system. This farm price can be approximated by reducing the shipping point price (139.4 cents) by the estimated average cost of transportation from farm to shipping point (i. e., the cost of collection).

The collection cost is estimated by assuming the product at the farm to be carried in a 2-ton truck, loaded to 75 per cent capacity, a distance of 6 miles and loaded upon the cars. The process excludes loading at the farm, but includes loading on the cars. Handling in all cases is assumed to cost $1 per ton. It is assumed that the truck returns empty to the farms. Based on these assumptions, and upon fixed charges and mileage costs for modern motor trucks, on average roads, the collection cost of potatoes amounts to 12.5 cents per bushel.

Subtracting the collection cost per bushel of potatoes (12.5 cents) from the shipping point price (139.4 cents) gives the estimated cost of production, or 126.9 cents. Subtracting the latter from the retail price (224 cents) gives the estimated cost of distribution, or 97.1 cents.

This distribution cost consists of the following items: (1) The collection cost; (2) the main haul; (3) the retailing cost; (4) the delivering cost.

The method of arriving at the collection cost (12.5 cents) has already been indicated. The main haul consists of movement from the shipping point to final distributing point (city retail store or its equivalent). Potatoes are hauled by rail an average distance of 50 miles, which represents about the average haul of products grown on land within a radius of 75 miles. According to freight rates furnished by the Interstate Commerce Commission in December, 1919, the average charge for carrying potatoes into Washington, D. C., from points 50 miles distant was 17.8 cents per 100 pounds, or an equivalent of 11.9 cents per bushel.

The product may be transferred from the car at the city terminal directly to the retail store or it may be carried indirectly through the wholesaler. The product is taken from the car, it is assumed, to a 5-ton truck, loaded to full capacity and carried an average distance of 4 miles to the retail store and there unloaded. The truck returns empty to the city terminal. The estimated cost of the haul here assumed and the two handlings is 8.7 cents. Adding the retail charge (11.9 cents) to the cost of transfer (8.7 cents) makes 20.6 cents per bushel as the cost of the main haul.

The retail cost is estimated on the basis of studies made by the Harvard School of Business Administration to amount on the average to 15 per cent of the retail price, i. e., 40.3 cents per bushel for potatoes in 1919.

The delivering cost from retailer to consumer is based on the following assumptions: A 2-ton truck loaded to capacity is assumed to make a round-trip of 4 miles in the

process of distributing the products to the consumers en route. This is equivalent to carrying a full load for 2 miles and returning empty. The process includes loading and unloading. The cost of only one handling is included, but the cost of hauling is doubled in order to allow for stopping, unloading, and starting at each point of the delivery. The cost of one handling plus the double cost for hauling makes 10.7 cents as the total cost per bushel for delivering potatoes.

Adding the above items—collection 12.5 cents, main haul 20.6 cents, retailing 40.3 cents, delivering 10.7 cents—makes a total of 84.1 cents as the distribution cost. Thus estimated, the distribution cost is 13 cents less than the difference between the retail price and production cost (97.1 cents) already arrived at. Part of this discrepancy includes the cost of wholesaling, not accounted for, and part includes variances to be expected in the other items. The extra cost of 13 cents has therefore been charged to wholesaling and other marketing costs. Hence, the total marketing cost would be 13 cents plus the cost of retailing (40.3 cents), or 53.3 cents.

Very much the same process has been gone through in arriving at the various elements of the retail price under the present system of production in the case of eggs and butter.

The method of arriving at the cost of production and retailing under the three alternative methods (designated A, B, and C, respectively) involving the use of the parcel-post service described in this article has been as follows:

A. Utilization of the rural postal station as a point for the collection and shipping of local produce and of the city postal station as a point for the distribution and retailing of such produce, the produce being transported from one station to the other through the postal motor service.

B. Utilization of the postal motor service for collecting produce from the farm and transporting it directly to the city postal station as the retailing point.

C. Utilization of the postal motor service for collecting produce from the farm and transporting it directly to the city consumer.

The costs involved in utilizing each one of these alternatives may be analyzed, taking the potato crop as an illustration.

Alternative A.—Collection from farm to rural postal station is assumed to be carried on by each farmer individually. This is done by means of the 2-ton truck loaded to 75 per cent capacity and returning to the farm empty. Average distance from farm to postal station is 2 miles. Potatoes are shipped in sacks, in units of 1 bushel (60 pounds). Total cost, hauling and one handling, 8.1 cents per bushel.

The main haul, between rural and city postal stations, is made by postal motor truck. The estimated actual cost thereof, using 5-ton truck, is 16.4 cents per bushel. The postal rate (outside of the temporary war tax) is 35 cents.

The only cost of marketing is that of distribution at the city postal station. The use of the postal facilities for this purpose would result in the elimination, in whole or in part, of certain unnecessary items—profits, buying costs, sales force, overhead, etc. It is estimated that the utilizing of these facilities in lieu of the present unwieldy marketing system would reduce the marketing cost from 53.3 cents per bushel for potatoes (as above estimated) to 19 cents.

Delivery from city postal station to consumer is assumed to be carried on as above described for delivery under the present system. The cost, as there estimated, is 10.7 cents per bushel.

The total distribution cost under alternative A (collection, main haul, marketing, and delivery) is 72.8 cents per bushel. This added to the production cost (126.9 cents) would make the aggregate cost (the retail price) 199.7 cents, as against 224 under the present system.

Alternative B.—Collection and main haul are here accomplished as one step at 35 cents per bushel by the Postal Service. Actual estimated cost is 30 cents.

Costs of marketing and of delivery are, as in alternative A, 19 and 10.7 cents, respectively.

The total distribution cost is 64.7 cents. This added to the production cost (126.9 cents) would make a retail price of 191.6 cents.

Alternative C.—Not only collection and the main haul but the marketing and delivery processes are here accomplished through the Postal Service for the 35 cents charge per bushel. The actual estimated cost is 34.5 cents.

The total distribution cost is therefore only 35 cents. This added to the 126.9 cents for production would make a retail price of 161.9 cents—a saving of 27.7 per cent over the present (1919) price of 224 cents per bushel.

The cost of production and marketing as given in Tables 1, 2, and 3 takes into consideration only the direct and immediate results which

may be expected to follow from an application of the postal system of distribution. Costs of production on the farm could also be substantially reduced through the effect, indirectly, of installing a comprehensive postal system of distribution. This would require reducing the cost of utilizing land, and this in turn requires a policy of basing land tenure solely upon use. Such a policy is working well on lands in foreign countries and is now being advocated for lands in this country by the Secretary of Labor. The effect would be to divert the "rental" cost, now paid for the unproductive function of mere ownership, into channels affording productive results, to wit: Increased compensation for the individual farmer, decreased prices for the individual consumer, and increased sources for meeting taxes paid by the general public.

But the savings made possible by an improved system of land utilization, or of food distribution, are likely to be lost unless each system is made to supplement the other. The advantages of a sound land policy will fail to reach the consumer unless there is direct cooperation between him and the producing farmer. On the other hand, the savings in food costs due to a sound distributing system are likely to be absorbed in higher rentals unless there is an effective public control of land tenure. The installing of a comprehensive postal system of distribution would thus create the opportunity for developing a policy of land utilization that would truly reduce the costs of food production.

Application of Postal System to the City of Washington.

THE city of Washington has been taken to illustrate a possible application, in a representative metropolitan center, of the proposed postal system of distribution. Such an application calls, on the one hand, for the food requirements of the city population, and, on the other hand, for the food productivity of available land in adjacent territory.

A food budget for the average family of five in the District of Columbia has recently been worked out by the United States Bureau of Labor Statistics.[1] This budget, reclassified in certain ways, is given in Table 4:

TABLE 4.—FOOD BUDGET FOR AVERAGE FAMILY OF FIVE.

Item.	Weekly quantity.		Weekly cost.	
	Pounds.	Per cent.	Amount.	Per cent.
Local staples, or products made therefrom:				
Vegetables—				
Potatoes, white	14.25	14.6	$0.71	4.9
Other vegetables, fresh and dried	10.89	11.1	.88	6.0
Other vegetables, canned	.84	.9	.24	1.6
Total	25.98	26.6	1.83	12.5
Fruits—				
Apples	3.92	4.0	.24	1.6
Other fruits, fresh	3.79	3.9	.46	3.2
Other fruits, dried and canned	.70	.7	.18	1.2
Total	8.41	8.6	.88	6.0

[1] Tentative quantity and cost budget necessary to maintain a family of five in Washington, D. C., at a level of health and decency (prices secured in August, 1919). Washington, 1919, 75 pp.

TABLE 4.—FOOD BUDGET FOR AVERAGE FAMILY OF FIVE—Continued.

Item.	Weekly quantity.		Weekly cost.	
	Pounds.	Per cent.	Amount.	Per cent.
Local staples, or products made therefrom—Concluded.				
Cereals—				
Flour, rye and graham	1.11	1.1	$0.09	0.6
Flour, wheat	6.38	6.5	.51	3.5
Bread, wheat	8.76	8.9	.88	6.0
Bread, rye and graham	.46	.5	.05	.3
Rolls, crackers, cake, and pastry	1.14	1.2	.28	1.9
Corn meal	1.23	1.2	.07	.5
Rolled oats	1.11	1.1	.11	.7
Other cereals	.45	.5	.07	.5
Total	20.64	21.0	2.06	14.0
Milk and milk products—				
Milk, whole	17.90	18.2	1.25	8.5
Milk, condensed and evaporated	1.25	1.3	.25	1.7
Buttermilk, cream, and ice cream	1.66	1.7	.18	1.2
Butter	1.54	1.6	1.05	7.2
Cheese	.38	.4	.19	1.3
Total	22.73	23.2	2.92	19.9
Eggs (1.3 doz.)	1.96	2.0	.79	5.4
Meat and meat products—				
Beef, fresh	3.92	4.0	1.44	9.8
Beef, salt	.38	.4	.14	1.0
Veal, fresh	.42	.4	.17	1.2
Pork, fresh	.74	.8	.38	2.6
Pork, salt (including smoked ham and bacon)	1.03	1.1	.53	3.6
Mutton	.60	.6	.22	1.5
Poultry	.52	.5	.24	1.6
Lard	.71	.7	.30	2.0
Other meat products (sausages, dried meat)	.66	.7	.25	1.7
Total	8.98	9.2	3.67	25.0
Total local staples, or products made therefrom	88.70	90.6	12.15	82.8
Southern, western, and foreign products:				
Fruits—				
Oranges and lemons	.71	.7	.10	.7
Bananas	.70	.7	.10	.7
Total	1.41	1.4	.20	1.4
Cereals—				
Rice	.85	.9	.14	.9
Macaroni, spaghetti, and noodles	.63	.6	.14	1.0
Total	1.48	1.5	.28	1.9
Sugar	3.13	3.2	.34	2.3
Tea	.19	.2	.15	1.0
Coffee	.76	.8	.40	2.7
Total southern, western, and foreign products	6.97	7.1	1.37	9.3
Fish and other sea food	1.31	1.3	.39	2.7
Other food (including jelly, oil, chocolates, cocoa, nuts, gelatin, canned soup, etc.)	.97	1.0	.76	5.2
Grand total	97.95	100.0	14.67	100.0

On the basis of this budget 500 families (2,500 population) would consume each week 48,975 pounds of foodstuffs, and their patronage would constitute a weekly retail business of $7,335. It is estimated that this would approach closely the amount of business (neither too great nor too small) that could be handled most efficiently by a modernly equipped retail store. The community unit of city consumers, therefore, is assumed herein to consist of 2,500 persons.

A food budget for a community of this size, in terms of agricultural crops, is presented in Table 5.

TABLE 5.—ANNUAL BUDGET OF RAW STAPLES FOR COMMUNITY OF 2,500 POPULATION.

Staple (or live stock).	Unit.	Annual consumption per capita in the United States.	Annual output needed to supply a community of 2,500 population.		Number of live stock needed for community.
				Pounds.	
Potatoes	Bushel	3.8	9,500	570,000	
Apples	do	1.6	4,000	200,000	
Wheat	do	5.1	12,750	715,000	
Rye, barley, and buckwheat	do	2.4	5,980	296,000	
Milk	Gallon	91.6	229,050	1,972,000	
As whole milk	do	42.5	106,250	915,000	
For butter	do	38.3	95,800	825,000	
For cheese and other uses	do	10.8	27,000	232,000	
Milk cows	Head	.22			550
Eggs	Dozen	18.1	45,030	57,000	
Cattle (all kinds):					
Number	Head	.64			1,600
For slaughter	do	.15	375		
Beef (total edible product)	Pound	78.8		197,000	
Veal (total edible product)	do	11.3		27,200	
Hogs:					
Number	Head	.64			1,600
For slaughter	do	.49	1,225		
Total edible product	Pound	86.3		216,000	
Sheep:					
Number	Head	.47			1,175
For slaughter	do	.15	375		
Total edible product	Pound	5.4		13,400	
Poultry: Number raised per annum	Head	5.6			14,000
Feed crops:					
Corn	Bushel	28.7	71,900		
Oats	do	14.1	35,400		
Hay	Ton	.8	1,990		

The bulk, though of course not all, of the food staples needed by the Washington population could be raised in adjacent territory. On the basis of local yields per acre the area of cultivated land required to supply a community of 2,500 persons is estimated at 11,560 acres. This is derived as shown in Table 6. To this total there should be added 15 per cent (2,040 acres) for permanent woodland, making 13,600 acres in all.

TABLE 6.—AREA NEEDED FOR COMMUNITY FOOD BUDGET, DISTRICT OF COLUMBIA AND ADJOINING STATES.

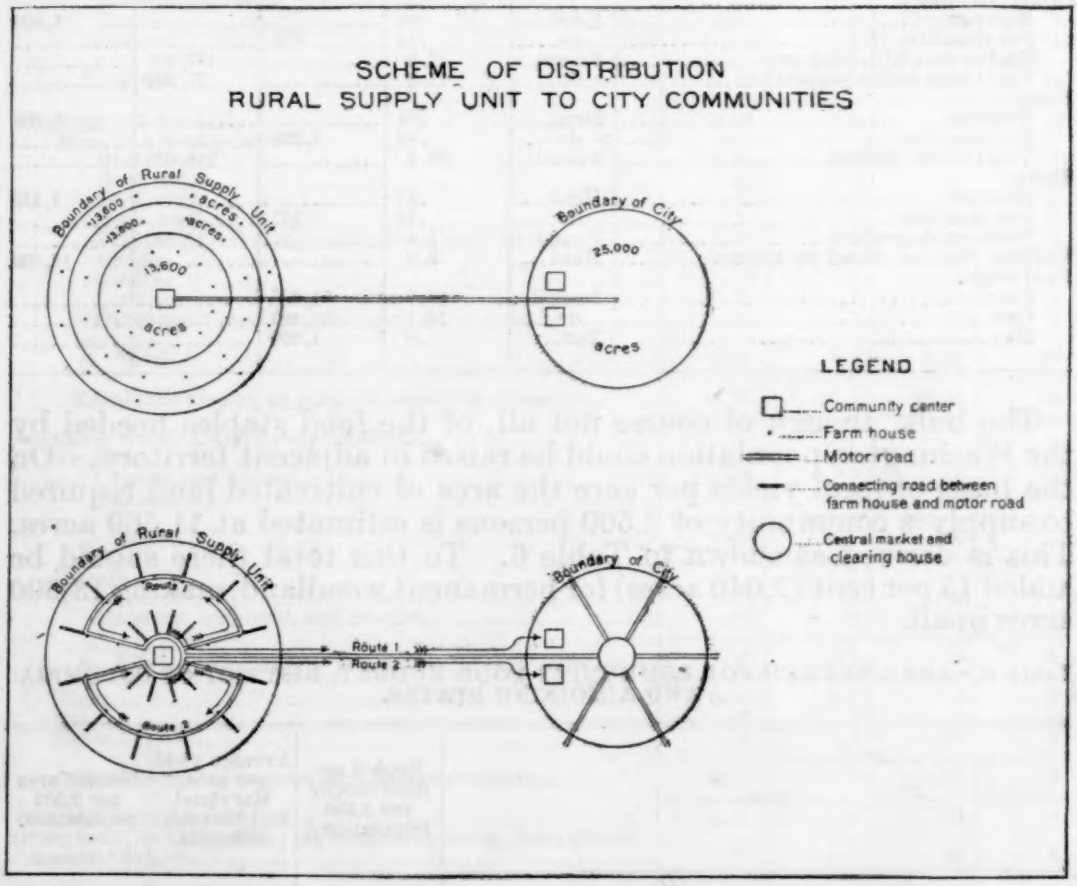
Item.	Needed annual supply per 2,500 population.[1]	Average yield per acre, Maryland and Virginia, 1909–1918.	Needed area per 2,500 population.
	Bushels.	*Bushels.*	*Acres.*
Total area			11,560
Specified food-producing crops			1,370
Potatoes	9,500	90.0	105
Apples	4,000		(2)
Wheat	12,750	14.4	885
Rye, barley, and buckwheat	5,980	15.7	380
In feed crops			5,410
Corn	71,900	30.5	2,360
Oats	35,400	25.5	1,390
	Tons.	*Tons.*	
Hay	1,990	1.2	1,660
Pasturage (improved)			2,220
Other improved land			2,560

[1] From Table 5.

[2] Orchard land included in "other improved land."

It is estimated that the working population of one agricultural community of 2,500 persons could work sufficient land of the kind described to support a total population of 7,500 (three communities of 2,500 each). This would require 13,600 acres multiplied by three, or a total of 40,800 acres. This area would support a group of food-producing factories of sufficient size for the requirements, including one creamery, one flouring and grist mill, and one abattoir. An agricultural community of 2,500 persons working this area could support itself (as to the main staples) plus two other equal-sized communities in the city. Such an area may be called a "rural supply unit." The scheme of distribution between the supply unit and the two city communities is shown graphically in Figure 3.

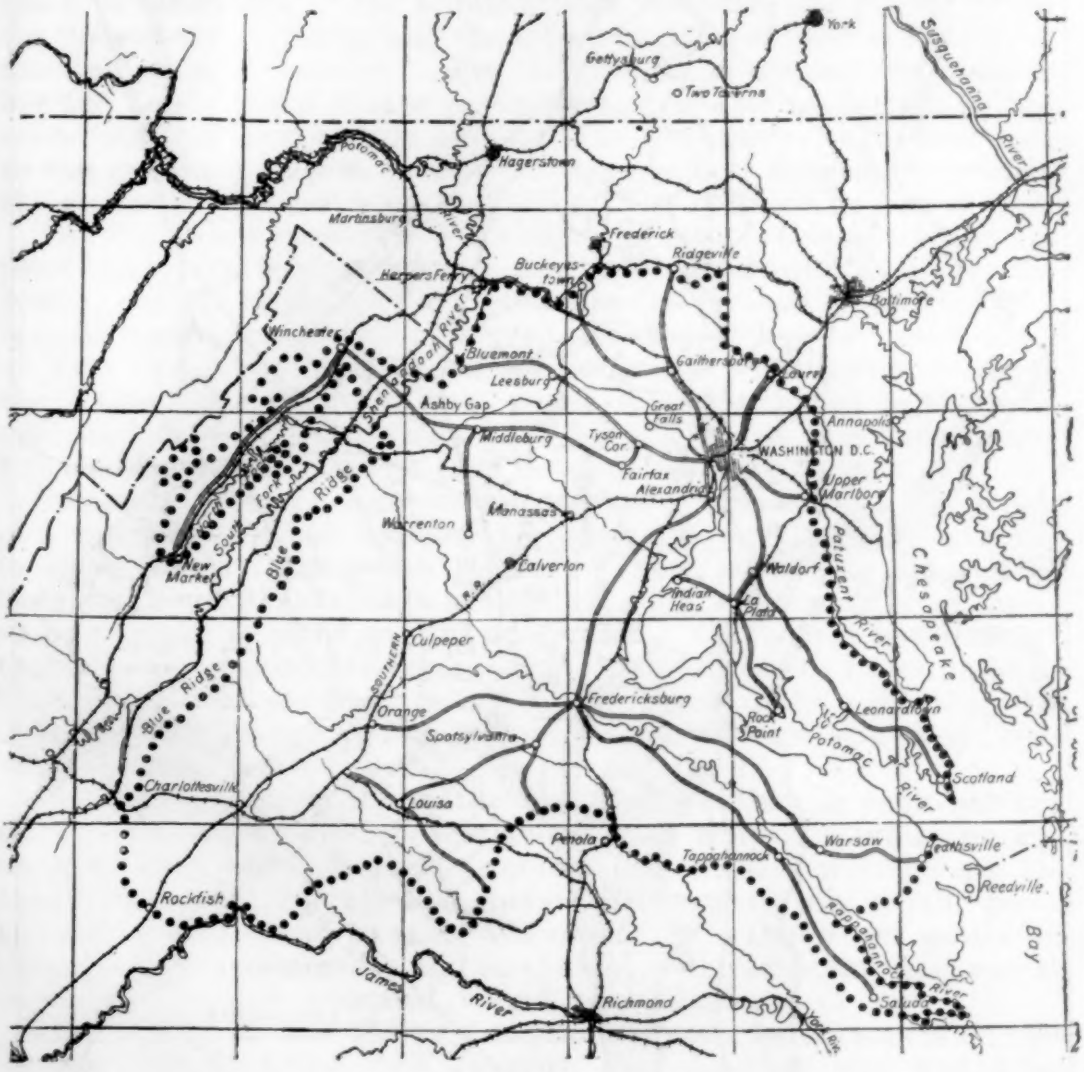
FIG. 3.



On the basis of the above estimates a certain territory has been delimited as that which is economically tributary to the City of Washington. The boundaries of this territory are shown on Map 1. Within these boundaries there are 4,900,000 acres of farm land, of which over 85 per cent (4,170,000 acres) can eventually be cultivated, leaving the other 15 per cent in the form of woodlots to be permanently managed as forest land. Of the total farm area (4,900,000 acres), there would be needed 2,420,000 acres to support the population (rural and urban) of 407,000 which is included within the "tributary territory" itself; the remaining 2,480,000 acres would then

be available to support the Washington population of 455,000. But these populations could not be wholly supported from this land until the arable portion (4,170,000 acres) is fully cultivated; at present only about 70 per cent of this portion is cultivated, leaving nearly 30 per cent (1,220,000 acres) yet to be improved. The main routes leading out of Washington (used or usable for the postal motor transport service) are shown on Map 1.

MAP 1.—BOUNDARY OF FOOD-PRODUCING TERRITORY ECONOMICALLY TRIBUTARY TO THE DISTRICT OF COLUMBIA, AND MAIN ROUTES INTO THE CITY.

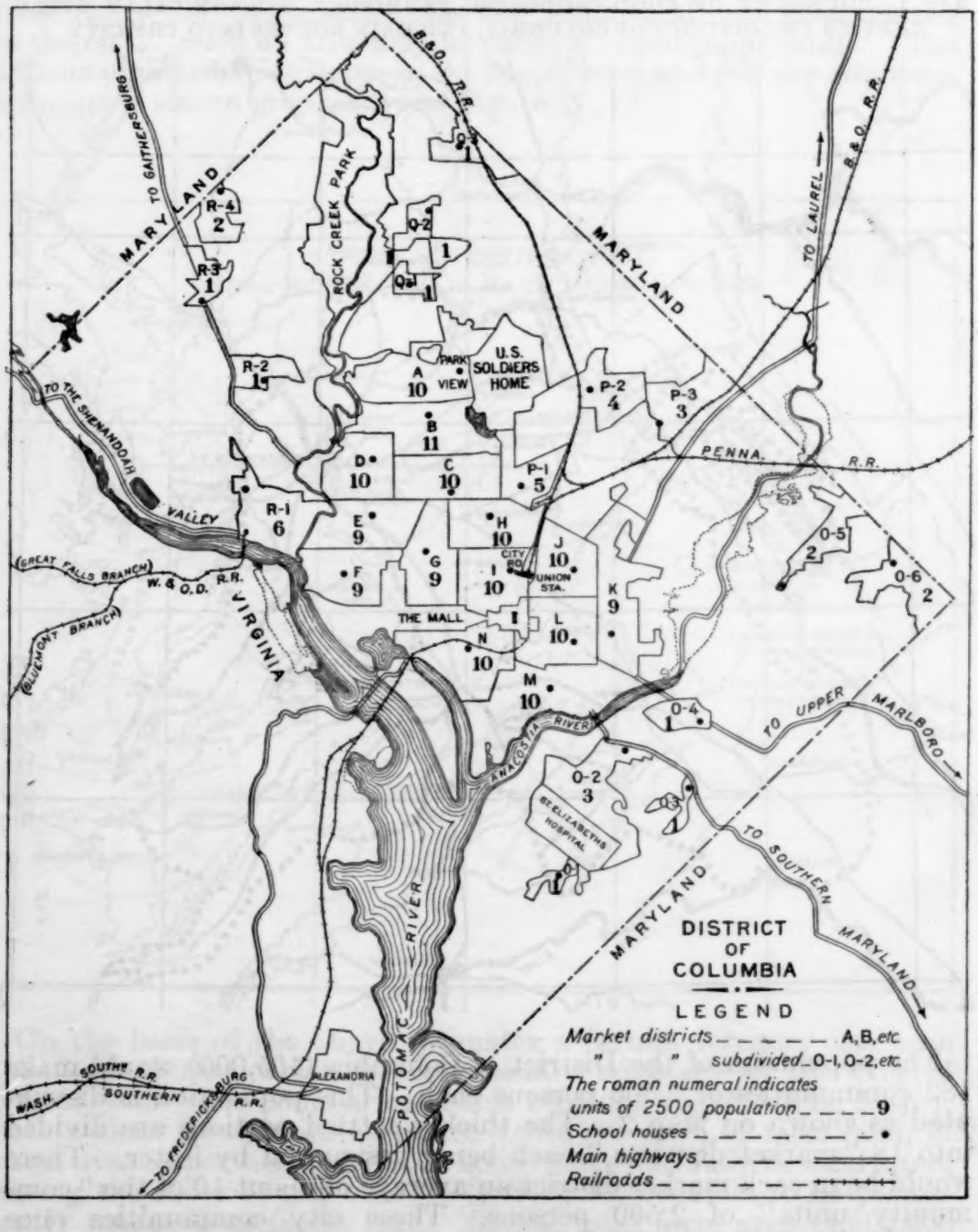


The population of the District of Columbia (455,000) would make 182 communities of 2,500 persons each. This population is distributed as shown on Map 2. The thickly settled portions are divided into 18 "market districts," each being designated by letter. There would be in each market district an average of about 10 of the "community units" of 2,500 persons. These city communities once organized, a close cooperation and exchange between them and the rural supply units could be maintained through the postal motor transport service.

Methods of Organization.

IT is not expected that the District of Columbia, or the territory tributary thereto, would ever be laid out precisely as described above. Food supplies are now being brought into Washington (by

MAP 2.—DISTRICT OF COLUMBIA DIVIDED INTO 18 "MARKET DISTRICTS" (LETTERED FROM A TO R).



postal truck and otherwise) from points far outside of the "tributary territory." On the other hand, a great deal of produce raised in such territory is shipped at present to Baltimore and cities north.

No final or fixed bounds to the food-producing area available for Washington is actually contemplated, but as before suggested, a "pattern" is necessary in order to make clear a definite goal toward which to work.

The organization of city (and rural) communities for marketing and other purposes is now going on in various parts of the country under what is called the "community center" plan. The method is for the people of a given locality to select a "community secretary," on salary, to take charge of certain community activities. One of these is education. The public-school facilities are placed under the "secretary's" charge and the school building is used as the official meeting place or "center." For the purpose of community marketing the local United States postal station is also made part of the center and the secretary is appointed as postmaster. He then acts as the purchasing agent (or the selling agent) of the people forming the community, receiving (or shipping) the produce by parcel post.

The Park View center in Washington illustrates this method as applied to a typical city community; and the Mount Joy (or Two Taverns) center, near Gettysburg, Pa., illustrates the method as applied to a typical rural community. Produce is collected by the "secretary" at Two Taverns and thence shipped over the postal motor route to the "secretary" at Park View, where it is distributed to the local citizens. Substantial savings have been made in this experiment, but the amount of business thus far done has been meager.

Community center organization might be stimulated by enlisting the interest of those who are affiliated not merely by geographic location but by occupation as well. There are in the District of Columbia some 91,000 heads of families, all of whom may be assumed to be engaged in some gainful occupation. Of these it is estimated that about one-third are organized on the basis of their occupations. This means that about 60 out of the 182 community units could be formed out of the families of organized workers; that is, two or three units in each "market district" shown on Map 2.

In view of this situation the affiliated workers in each market district (or in certain districts) might take the initiative in organizing at least one community center. Since these workers are already associated for their economic betterment this would be a natural step for them to take. Membership in the center would be open to citizens generally, and so the use of the schooling and postal facilities, as above described, would be available.

The rural as well as the city community may be organized on the "center" plan—as at Two Taverns, Pa. Another way would be to establish a "farm colony," as they do in Australia. Under this method the State acquires a tract of land and opens it to individual settlement on the basis of actual use. This is the plan being advocated by the Secretary of Labor. It applies especially to sparsely populated areas, as in swamp lands and cut-over timber sections. A number of "rural supply units" in territory adjacent to Washington could probably be organized around farm colonies. A tract of a thousand acres purchased by the State or a private association, and established as a colony, could form the nucleus for organizing,

on the community center plan, several more thousand acres in the immediate vicinity.

A further step in the farm-colony idea is that embodied in the "garden city." This is, in effect, an enlarged farm colony; it is a farming community to which there is added industrial factories and the population to run them. Agriculture is combined with manufacturing. This method of development is probably best illustrated in the little city of Letchworth, in England, 30 miles out of London. This city was planned and built as an integral unit. Several such towns have recently been laid out in Canada, as the one at Lake Temiskaming, the future seat of a pulp-mill operation in one of the forested sections of the Province of Quebec.

The establishment of towns of this kind—planned deliberately to maintain a proper balance between the industrial and the agricultural population—is perhaps the most potent means for withdrawing the surplus populations from our congested metropolitan districts. This method might well be applied in the case of the city of Washington before the congestion reaches the overwhelming stage of the cities of the north and east. Opportunities for doing this exist in the "tributary territory," and their development would be fundamental in working out a comprehensive system of distribution through the postal motor service.

If "community units" were once organized in the city and "supply units" in the rural sections, it would be a comparatively simple matter to obtain close cooperation between them through the postal system. But organization and cooperation must go hand in hand. Judging from experience in England, and from the small beginnings made in this country, the initiative in this kind of cooperation is more likely to come from the city than from the rural community. The city needs help from the country more than the country needs help from the city. The tendency seems to be for cooperative effort to extend from the city store backward—first into marketing connections with the farming areas, and finally into the actual agricultural enterprise itself.

Extension of System Throughout the Country.

THE extension throughout the United States of the proposed postal system of distribution would be largely a matter of repeating in other centers the methods already described in the case of the city of Washington. But a new factor would be introduced, namely, the exchange of produce between the various centers. In no one region can there be grown all of the food products deemed necessary for modern civilization. In practically every locality there would be a deficiency of one or more of the main staples of life. On the other hand, a large proportion of localities—especially those in the prairie States—have a surplus of one or more of these staples.

The first process of exchange, under a truly orderly system of distribution, would be, as far as possible, to supply the deficiencies of each community in a given city and its "tributary territory" out of surplus products grown in the other communities within the same territory. The scheme for doing this is shown in Figure 4.

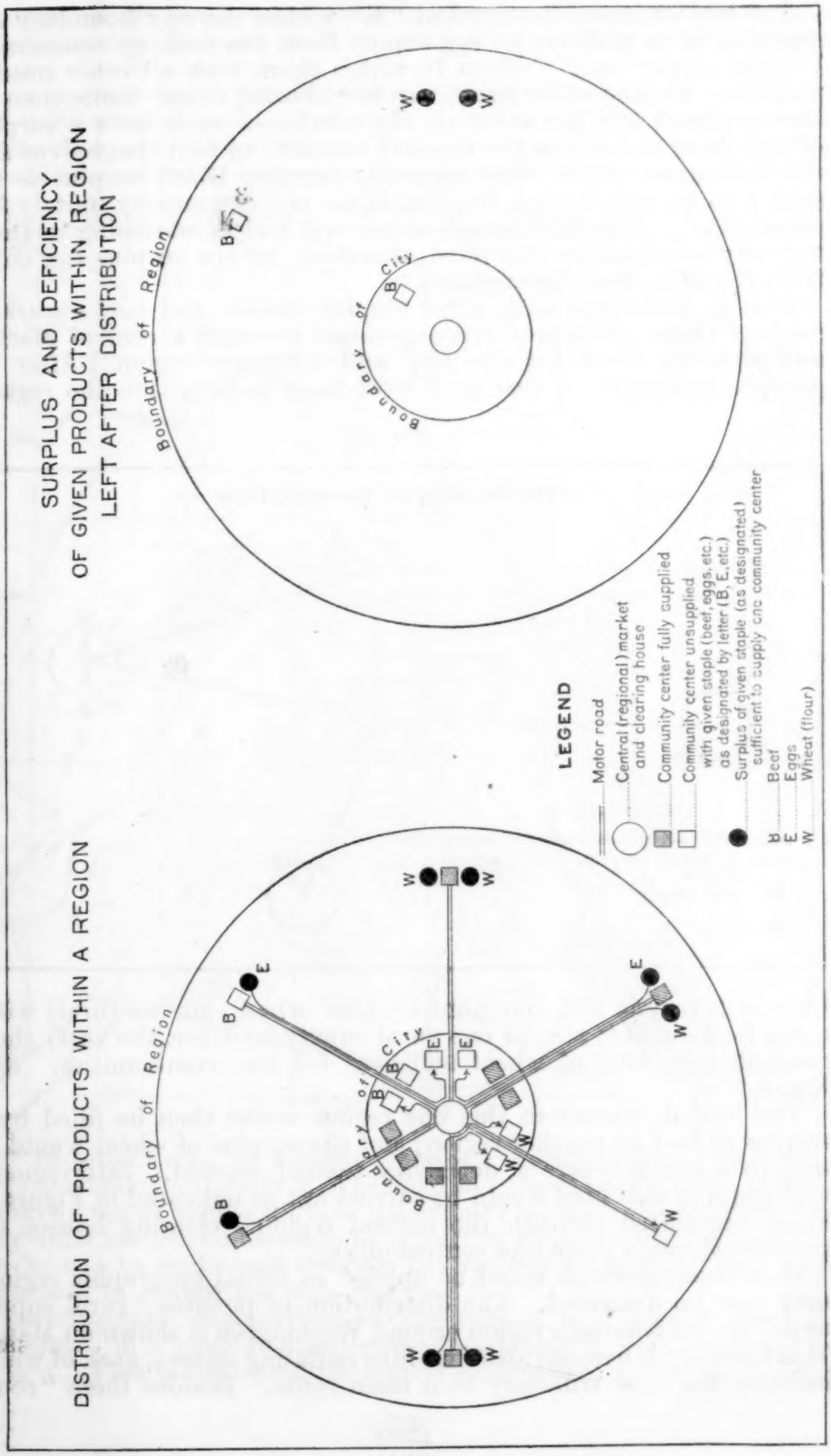
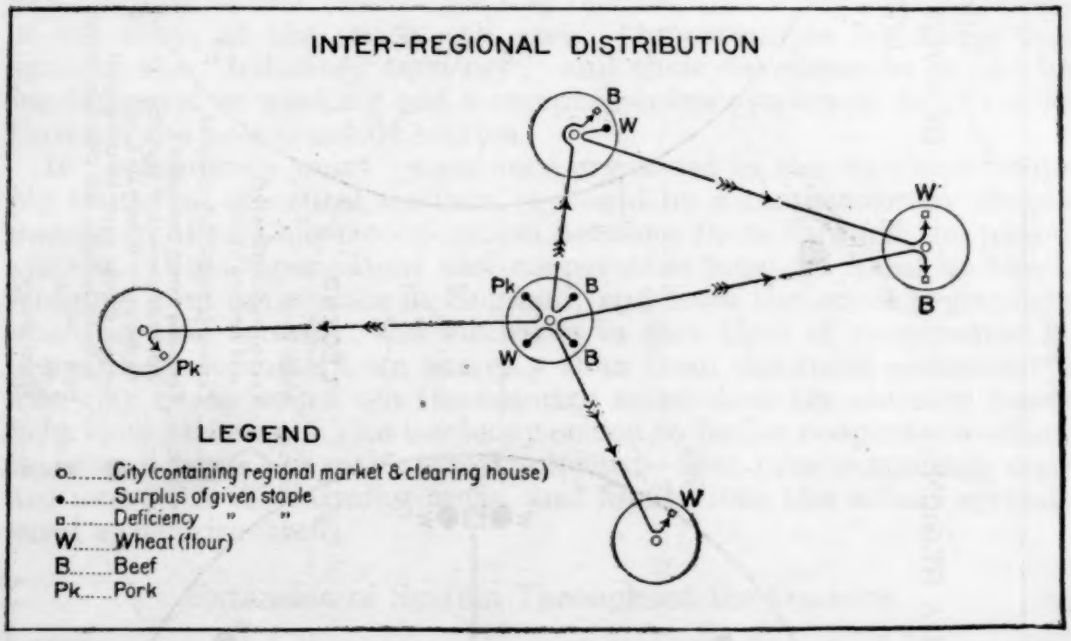

DISTRIBUTION OF PRODUCTS WITHIN A REGION
SURPLUS AND DEFICIENCY
OF GIVEN PRODUCTS WITHIN REGION
LEFT AFTER DISTRIBUTION
Boundary of Region
Boundary of City
City
LEGEND
Motor road
Central (regional) market and clearing house
Community center fully supplied
Community center unsupplied with given staple (beef, eggs, etc.) as designated by letter (B, E, etc.)
Surplus of given staple (as designated) sufficient to supply one community center
B Beef
E Eggs
W Wheat (flour)

FIG. 4.

The two communities marked "E" within the city boundary are assumed to be without an egg supply from the country community ("rural supply unit") which furnishes them with all other needed produce. On the other hand, two neighboring supply units (one on the northeast and the other on the southeast) each have a surplus of eggs over and above the amount required to feed themselves and the city units which they normally supply. Each surplus is assumed to be just enough to provide for one community unit (2,500 population). The deficiencies in the egg budget obtaining in these two city communities are filled, therefore, by the surplus egg crops from the two rural communities.

Similar exchanges with other staples—wheat and beef—are also made. These exchanges are negotiated through a central market and clearing house for the city and tributary region. After all possible exchanges of this kind have been made within the region

FIG. 5.



there still remain two communities (one urban and one rural) without a beef supply; also in one rural supply unit (on the east) there remains a surplus of wheat sufficient for two communities. (See Fig. 4.)

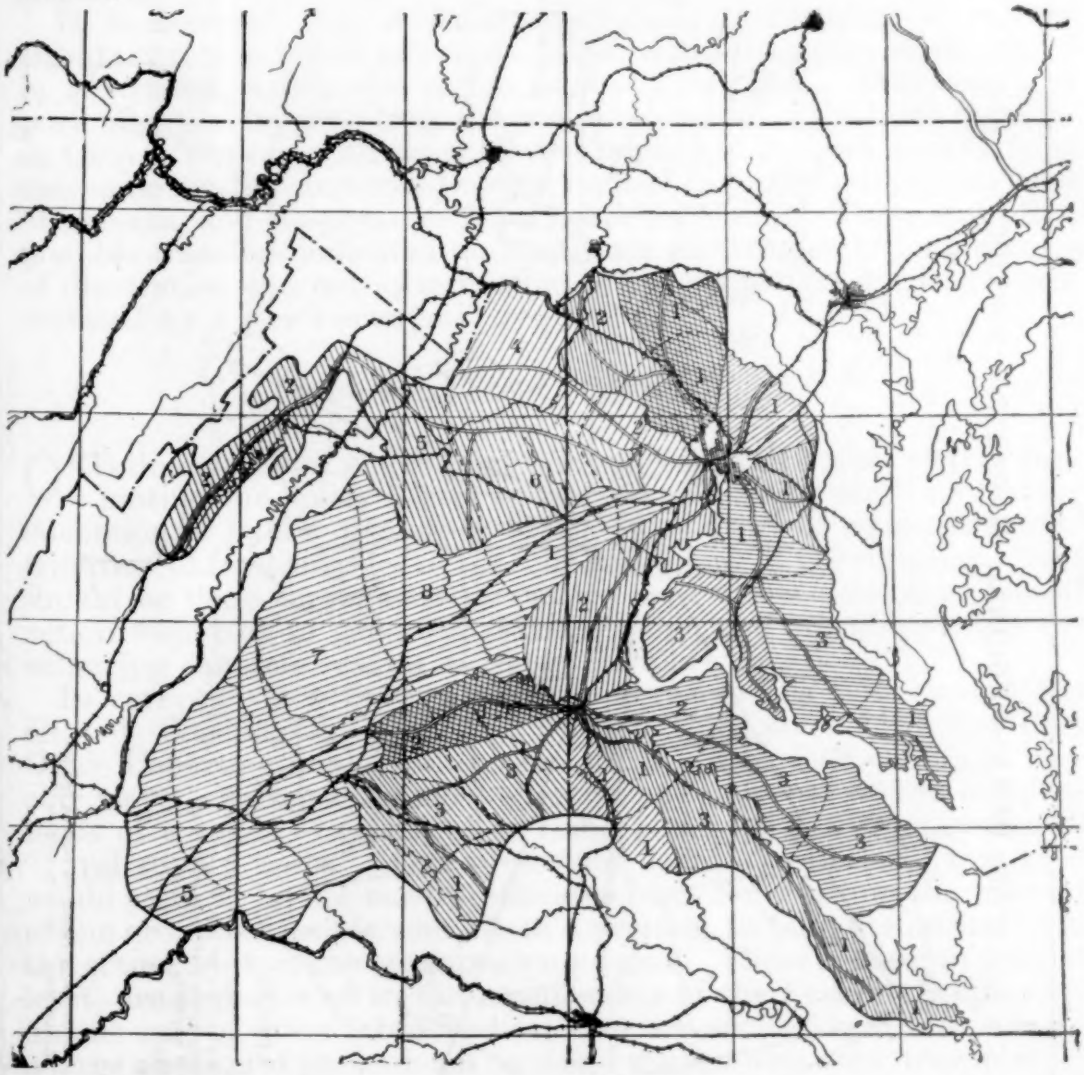
The beef deficiency in this one region would then be filled by a surplus of beef in another region; and the surplus of wheat would be sent to a region where a deficiency thereof existed. Interregional exchanges of this kind would be carried out as indicated in Figure 5, being negotiated through the several regional clearing houses (or possibly through some one central office).

How these methods could be applied in actual geographic regions may now be described. The distribution of possible "rural supply units" in the tributary region around Washington is shown on Map 3. This territory is here divided first into radiating sectors, each of which includes the land tributary to a main route. Besides these "route

sectors" there are several roughly circular "distance belts," each approximately 25 miles wide, crossing the radiating sectors at right angles.

Since there are in the District of Columbia 182 community units (of 2,500 persons each) there would be needed 91 rural supply units (182 ÷ 2) to provide for them. These 91 units, if actually organized, would be distributed among the "route sectors" described and within

MAP 3.—TRIBUTARY TERRITORY DIVIDED INTO "ROUTE SECTORS" AND "DISTANCE BELTS." (NUMERALS INDICATE POSSIBLE LOCATION OF RURAL SUPPLY UNITS.)

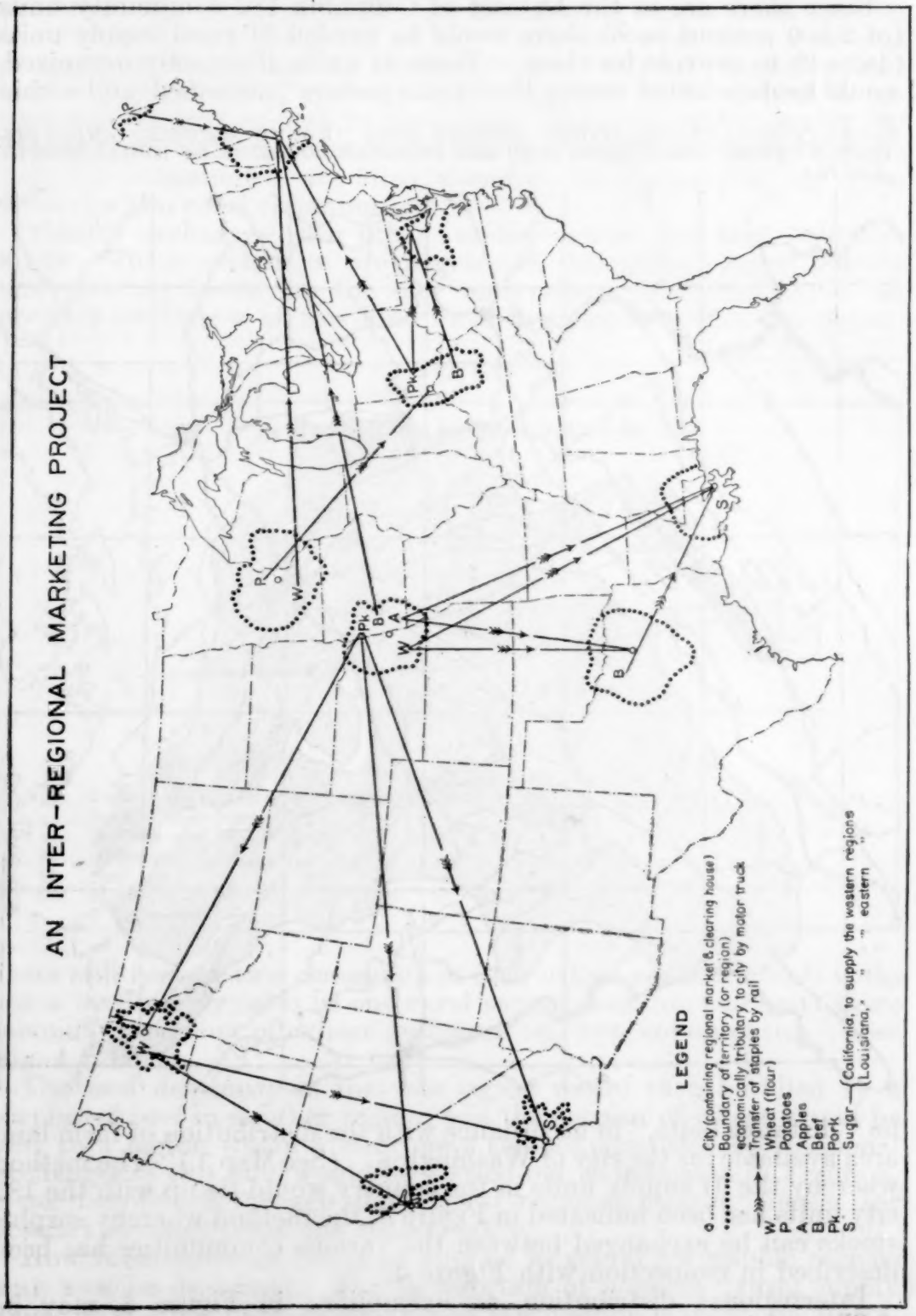


he "distance belts," in accordance with the distribution of farm land area available for the city of Washington. (See Map 3.) The method whereby the 91 supply units in the country would tie up with the 182 city units has been indicated in Figure 3; the method whereby surplus stocks can be exchanged between the various communities has been described in connection with Figure 4.

Interregional distribution, as exemplified in Figure 5, may be illustrated in a possible interregional marketing project presented in Map 4. This project includes typical centers throughout the United

States. The tributary territory (or region) around each center is that within an economic haul by motor truck. A maximum limit of 150 miles (road distance) is assumed, but the radius is usually rendered

MAP 4.



much shorter than this by reason of topographic features or in order to eliminate territory economically tributary to neighboring centers of equal importance.

Transfers of main staples from one region to another might be made as indicated on the map. These transfers being for long distances would usually be made by rail, and would be negotiated through the clearing houses. The region tributary to Washington, though having sufficient potential arable land to support its population, does not raise a complete quota of all food staples. No survey has been made (either for the Washington region or for any of the others indicated) of actual production and requirements. Such surveys would form part of the project. Pending these surveys certain transfers are assumed.

It is assumed that deficiencies of beef in Washington and its tributary region would be supplied from possible surplus stocks raised in Kentucky, within the region around Cincinnati. Deficiencies in pork might be supplied from the northern portion of the same region—in Ohio. Boston, with its environs, might get its pork supply from this same locality, but could obtain its beef from Iowa, its wheat from Minnesota, and its potatoes from northern Maine. These and other possible transfers indicated on Map 4 are shown merely for purposes of illustration and not as indicating actual exchanges nor even those dictated by a strict economy.

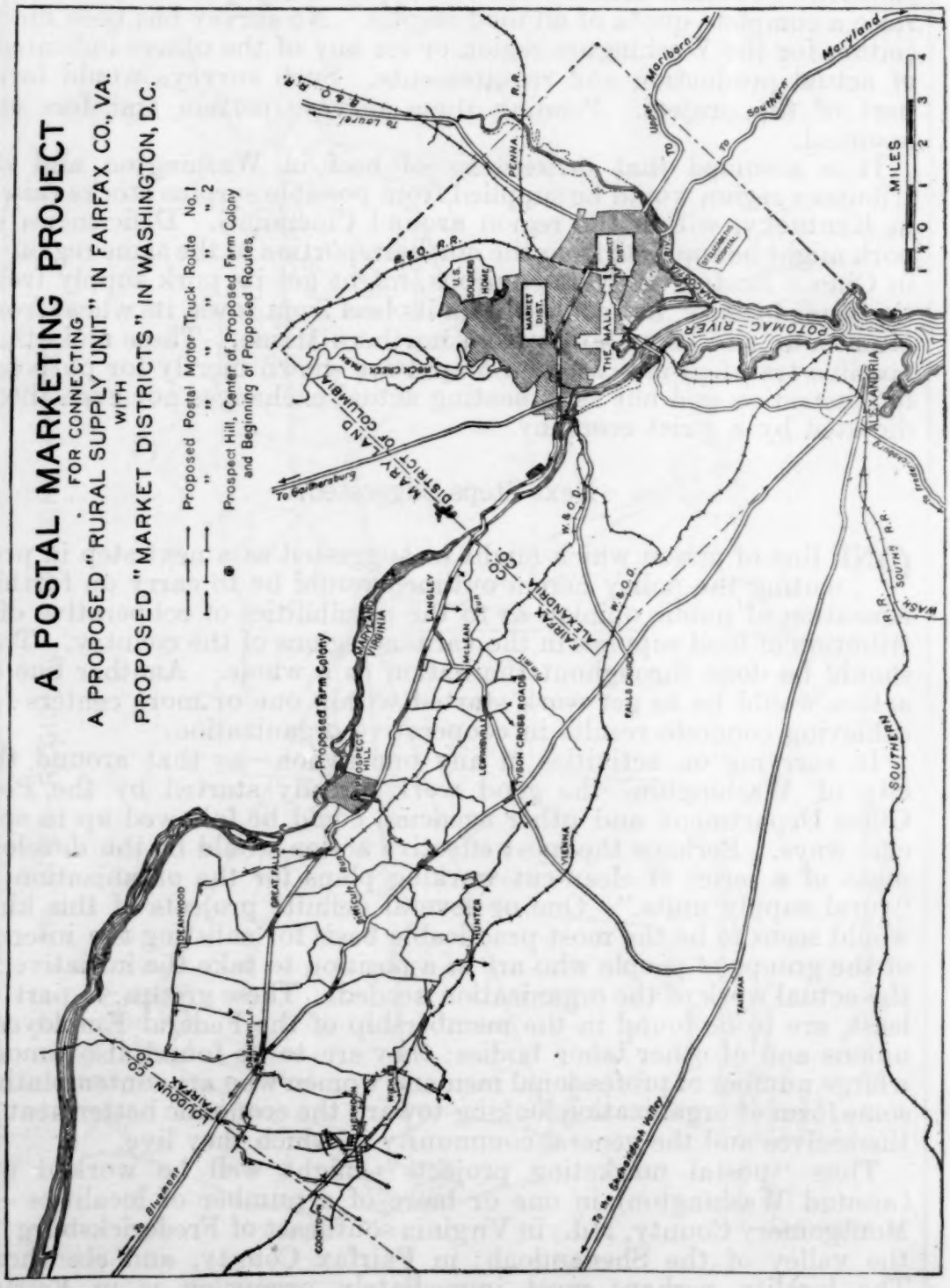
Next Steps Suggested.

ONE line of action which might be suggested as a next step in promoting the policy herein outlined would be to carry on further education of public opinion as to the possibilities of cooperative distribution of food supplies in the various regions of the country. This should be done throughout the nation as a whole. Another line of action would be to get work started within one or more centers for achieving concrete results in cooperative organization.

In carrying on activities in any one region—as that around the city of Washington—the good work already started by the Post Office Department and other agencies, could be followed up in specific ways. Perhaps the most effective action would be the development of a series of clean-cut working plans for the organization of "rural supply units." One or several definite projects of this kind would seem to be the most practicable basis for enlisting the interest of the groups of people who are in a position to take the initiative in the actual work of the organization needed. These groups, in part at least, are to be found in the membership of the Federal Employees' unions and of other labor bodies; they are to be found also among a large number of professional men and women who are contemplating some form of organization looking toward the economic betterment of themselves and the general community in which they live.

Thus "postal marketing projects" might well be worked out (around Washington) in one or more of a number of localities—in Montgomery County, Md.; in Virginia southeast of Fredericksburg; in the valley of the Shenandoah; in Fairfax County, and elsewhere. The locality perhaps most immediately promising is in Fairfax County, Va., north of the Leesburg Pike near Great Falls, where plans are already under consideration for the development of a farm colony.

To illustrate what is meant by a "postal marketing project," the Fairfax locality, just mentioned, might be taken. This project is shown on Map 5. A proposed "rural supply unit" covering about 37,000 acres is shown bordering the Potomac between the Alexandria



MAP 5.

and Loudoun County lines. A proposed farm colony of about 325 acres is located at Prospect Hill near the middle of the unit. This colony could be the "community center" of the whole unit.

From this center two proposed motor-truck routes would start. These are shown on the map. Route No. 1 would traverse the north side of the unit and lead into the market district in the northwest section of the city of Washington. Route No. 2 would traverse the south side of the unit and lead into the market district in the southeast section of the city. Each route would supply a "community unit" of 500 families located within the respective market district. The length of each route is about 42 miles.

The development of such a project would require at the outset a considerable amount of road improvement. It would require also much land improvement. If the locality described is typical of Fairfax County as a whole, only about half of the acreage consists at present of cultivated farm land, and the possibilities of increasing this acreage could only be disclosed through a detailed survey and working plan.

Concrete engineering proposals for the cooperative development of a few localities in and around a metropolitan center (like Washington), similar development for two or three other centers, and arrangements made for exchanges between them—such a policy, persistently and systematically carried on, could be made gradually to initiate a new departure in a situation growing steadily more serious. It would constitute at least one constructive approach toward realizing a true solution.

Two Years of Industrial Legislation in a Large Clothing Factory

By O. F. CARPENTER, UNIVERSITY OF WISCONSIN.

IN 1914 John Leitch "sold" the idea of "industrial democracy" to the management and employees of a large clothing factory in the Middle West. The shop organization has had all the features of the Leitch system: A senate, a house of representatives, a cabinet, and a collective economy dividend.

In his book[1] Leitch assumed "as settled without argument that American principles of democracy are right," and made "application of these principles to the government of a factory." He defined industrial democracy as "the organization of any factory or other business institution into a little democratic state, with a representative government which shall have both its legislative and executive phases." An examination of the Leitch plan, however, reveals considerable differences between it and the United States Government. The latter is made up of representatives from one body—the citizens of the Republic. Representatives, Senators, President, all come from and represent the same great constituency, while in industry there are capital and labor to be represented. Leitch met this dualism by giving the employees a house of representatives and by giving the management a Senate and cabinet.

The Government of the United States was designed to promote deliberation and to prevent quick action. Each house of legislation acts as a check upon the other; each department of Government acts as a check upon another department; so that our Government has been characterized as a system of checks and balances. Industry, on the other hand, must have action—prompt action—and output. The question arises: Can a form of government that "balances" authority and promotes deliberation rather than action be appropriated for industry with its need of prompt settlement of disputed questions?

Leitch simply added a "legislative" to the already existing "executive" phase of shop government. As regards the popular branch of the organization, legislation becomes the major problem, the working out of which involves two things: (*a*) Evolving a method of legislation, and (*b*) creating a form of government suited to that method.

The tense labor situation that began with the spring of 1918 and held throughout 1919 brought to this shop its critical period and forced a solution of these problems. There arose in acute form the questions of wages and hours, of the form of government, of methods of adjusting grievances, besides a multitude of grievances covering every imaginable phase of the bonus question. The machinery for adjusting grievances was clumsy and at this time clogged up; for up to this time grievances had to be acted upon by the house, passed on to the senate, and then on to the cabinet before a settlement could be effected. If the senate refused to concur, there followed a delay while the differences between the two houses were being ironed out.

[1] Leitch, John. Man to Man. The story of industrial democracy. New York, 1919, 249 pp.

It was a slow process at best, and this was a time that brooked no delays. Both sides recognized that the "industrial democracy" had to be speeded up. When, therefore, a suggestion was made to the house, April 16, 1918, that a wage rate committee be selected and given full power to take up with the management directly complaints about wage and bonus payments and settle them, it found a ready response, and at a special meeting the next day the house agreed to create such a committee. A wage-rate committee, consisting of one member from each department, was then made one of the permanent committees of the house.

All the accumulated complaints were turned over to the new committee. For one whole year the committee busied itself investigating individual cases. The company was anxious to adjust these complaints satisfactorily to the employees and willingly cooperated to that end. But it proved a never-ending job, for while the committee was investigating and settling one case there was another case—sometimes two or three cases—added to the waiting list. The year's experience taught the committee that the way to handle a multitude of individual cases is to classify them and then make regulations for each class.

High-Cost-of-Living Bonus Converted into Wage Increase.

IN January, 1918, the management introduced a high-cost-of-living bonus, which was intended to be the means of keeping wages in step with the cost of living. The amount of this bonus, which was to be varied from month to month on the basis of Bradstreet's index number, was put into a separate envelope so that employees would not confuse it with their regular wages. This seems to have complicated the bonus system. The production bonus was the successor of the old collective economy dividend, which was a group incentive plan. At this time there were four classes of production bonuses, based upon the per cent of the "standard time" used in completing the task. Thus, for example, employees who performed a given task in from 130 to 115 per cent of the standard time were put in class 1; from 115 to 100 per cent of standard time, in class 2; from 100 to 85 per cent, in class 3; 85 per cent and lower, in class 4. The house had voted its approval of the high-cost-of-living bonus, but it made the bonus system top heavy. The dissatisfaction which developed soon crystallized into a demand for converting the bonus into a wage increase.

On July 30, 1918, the wage-rate committee proposed to the management that a 12 per cent increase in wages be substituted for the high-cost-of-living bonus. At the following meeting of the house a representative of the company appeared to explain why this additional bonus had been granted instead of an increase in wages. The house took no action at this meeting, as it is the policy of each side to try first to come to an understanding with the other side before taking action, but at the next meeting a bill was passed providing for the wage increase. The house accompanied this bill with a statement of its intention to ask for wage increases from time to time to correspond to the rising cost of living. The senate and cabinet concurred in the action of the house.

Result of One Test of Industrial Democracy.

DURING the summer of 1918 the International Ladies Garment Workers established their union in many factories of the city. The union organizers look with no more favor upon Leitch's "industrial democracy" than upon the "Rockefeller plan." They tried to organize this factory along with the others. They engaged the employees in conversation and asked them all kinds of questions about their "industrial democracy," their bonuses, and their wages. When an employee mentioned his wage rates, the organizer would tell him about the rates in New York and would compare in dollars and cents the value to the worker of "industrial democracy" and the union. If an employee got tangled up in trying to explain his bonus system, the organizer "kidded" him about it, and wondered if he wouldn't like to have a system he could understand. The union won but very few sympathizers, but among these was a member of the house. There were a number of questions pending between the employees and the firm, and the union activity helped bring them to a focus. There had to be action, and a joint discussion of the situation took place before the house.

The spokesman for the employees reminded the management of the constantly rising cost of living and the hardships it was imposing upon the workers. The workers, he continued, not only had to support themselves and families but were also being constantly solicited for subscriptions to Liberty bond issues and the many other voluntary war activities. Then, too, there was the higher wages in New York. Were they not worthy of as good wages as the garment workers in New York?

To this the spokesman for the management replied in substance: You should take the seasonal character of the industry in New York into consideration when comparing the wages paid in the two cities. This company by careful planning and with your cooperation has circumvented this seasonal character of our industry and can provide steady employment the year round. The New York firms, not having made these arrangements, are obliged to take orders when they come and shut down when the season ends. This means periods of unemployment for the workers there. If you compare your annual wages with the annual wages of the New York clothing workers, you will find that your wages average more than theirs. No doubt the employees in New York have increased their hourly and daily rates by resorting to strikes. But these very strikes bring chaos into the industry there, manufacturers are unable to avoid seasonal shut-downs, and what the employees gain by the strike they lose again during the long periods of unemployment. The situation in New York can be duplicated here if the employees will it, by substituting the method of the strike for the method of cooperation. The greater the stability of the firm the more prosperous it is and the better able to pay wages to its employees. When the clothing workers strike in New York, the firms there are at a disadvantage with the firms, not tied up, elsewhere. This firm has had the advantage over their New York competitors, has not had to shut down, and has been paying the greatest annual

wage. If a strike comes, the situation will be reversed. The company will be at a disadvantage with competitors, will lose trade, will have all plans for stabilizing the industry upset, and will probably have to bow to the seasonal fluctuations. You are partners in the good or bad fortunes of the industry. You have your choice of alternatives.

After the close of the discussion the house refused any sanction to strike, and condemned the union for "threatening to call a strike without our approval." The wage rate committee was instructed to hasten the two proposals which it was handling, namely, a revision of the rate schedules, and the transfer, which has already been described, of the high-cost-of-living bonus to the regular pay envelope.

The union called a strike. A few of the employees joined the strike in spite of the action of the house, but, so far as this firm was concerned, the strike was inconsequential. However, when the house found out that one of its members sympathized with the union it promptly expelled him. Later the company discharged this ex-member of the house and another employee. When the union leaders heard about these dismissals they had the company haled before the War Labor Board on charges of discrimination against trade-unionists. If the union had succeeded in establishing a case against the firm, it would have been ground for bringing the company under the award of the War Labor Board. This would have meant, practically, the adjournment of the "industrial democracy."

Neither the management nor the house desired to see this happen. The case was long drawn out and stubbornly fought, though the company did not make out a very strong case for itself. It had dismissed these employees for making trouble, but the union and dismissed employees replied that it was merely another case of malice toward trade-unionists. The company might have lost the case if a delegation from the house had not defended these dismissals before the War Labor Board upon the ground of disloyalty to the existing organization in the shop. They told the board that the employees had the kind of organization that the great majority of them wanted, and that they had the same right to expect loyalty to their organization that the union had to exact it from union members. They told the board, further, that they wished to continue to settle their affairs directly with the company, and protested vigorously against being brought under the award.

The company was not brought under the award, but there was a general feeling that it had had a narrow escape. The house discussed the matter and concluded that, since such controversies involve the house as well as the firm, the company should not take future actions of this kind without first getting the approval of the house. The house concluded, also, that the handling of grievances should be speeded up, so it submitted two proposals to the senate and the cabinet, one providing for joint action in discharging employees, and the other providing that all grievances respecting wages, hours, and bonuses be handled by the wage rate committee without previous reference to the employment department. Both proposals were concurred in by the senate and the cabinet.

The union had charged that the house was dominated by the company. The company executives had frequently participated in discussions before the house, as they are doing in other Leitch organizations. It is not affirmed that this accusation of the union had any influence on the subsequent action of the house, but, at any rate, a resolution was adopted soon afterwards that company representatives be permitted to be present only upon the invitation of the chairman of the house, and that they be required to retire immediately after their remarks. The aggressive temper of the house was shown again a little later by its dismissal of the betterment committee and the appointment of a new one because it was convinced that the old committee was not doing its duty.

Revision of the Constitution.

THE annual elections took place about October 1, 1918. Sentiment was strong for a revision of the constitution and a simplification of the government. When the house reorganized on October 8 the president advocated larger powers for the house and its further separation from the management. He urged the house to have its own secretary and treasurer and pay them out of its own funds. Two weeks later a committee was appointed to revise the constitution.

The revised constitution was submitted to the house on November 26, 1918. It provided a house of representatives to deal directly with the management and abolished the senate. The factory organization had begun with one house—the senate. Six months later the house of representatives and the cabinet were added. But the senate had proved a failure as a legislative body, although it had served its purpose as a training school. Now the organization was again to be a one-house affair, but the employees' house. The new constitution was adopted by the house and approved by the senate and cabinet. The old system had not provided the expected direct contact of the management with the employees. The senate was always a buffer. The management now has a planning board of six members through which it deals with the house. This board meets twice a week and keeps in close touch with the house committees. By such consultation and cooperation it is possible for the house to know the management's position on proposals that are submitted to it by the committees.

Revision of Wage Rates—Physical Examination of Workers.

WHILE the house was busy with the revision of the constitution, the wage rate committee was preparing a revision of the rates. The work of the committee had been hampered both by the previous method of revising rates, which was not abandoned until August, 1918, and by the uncertainty of the outcome of the controversy with the War Labor Board. If the company had been brought under the award, the employees would have been bound by the rates specified in the award, and the wage rate committee would have been powerless until its expiration. As soon as assurances came that their desire to remain independent would be respected, the committee began preparing the new schedules.

For the purpose of this revision employees were classified according to the degree of difficulty of the operations they performed, e. g., (1) most difficult, (2) difficult, (3) medium, and (4) simple. After applying the classification in a few of the departments, the committee decided to have the foremen and superintendents do the rest of the classifying of employees, but reserved to itself the right to review individual classifications upon complaints by the operators. The committee and planning board reached an agreement also that any person who is changed to a different operation shall receive his old rates for three days after the change.

The wage rate committee submitted the new rate schedules and agreements to the house, where they were adopted. The senate gave its last approval to a wage bill, and the rates and agreements then became effective.

The question of physical examinations for new employees came before the house and was approved in January, 1919. The fear that such examinations will become an economic hindrance to those found defective seems to pass away as employees feel themselves strong enough to prevent abuses. Nothing else of importance seems to have been done by the house during the winter.

The 44-hour Week.

THE spring of 1919 opened with the 44-hour week as the major issue. The Amalgamated Garment Workers of Chicago and the International Ladies Garment Workers of New York had won easy victories, and the drive for the shorter week was on everywhere. On April 8, 1919, the chairman of the house appointed a special committee to investigate the problems incident to introducing the shorter week in the shop. The committee was ready with its report the following week.

The report emphasized at the outset that reduction in hours should not be permitted to result in reduced production. Such a reduction, if it should occur through the whole range of industry, the committee argued, would inevitably be a factor in the further advancement of prices, the final outcome of which would mean a virtual reduction of income to the workers as the result of the shorter hours and curtailed production. Since the workers' aspirations for higher standards of living are connected with efficient production, and also with the prosperity of the industry, the report emphasized the mutual responsibility of management and employees for the improvement of processes and the reduction of costs. The most important of the recommendations of the committee may be summed up as follows:

(*a*) That hours be reduced from 48 to 44 without diminution in pay.

(*b*) That a 44-hour committee be appointed by the house to see that the rules governing the introduction of the 44-hour week be carried out and that employees cooperate in maintaining the previous standard of production.

(*c*) That there be no work on Saturdays; however, operators who fall below the permanent standards of production may be required to work on Saturdays at the regular rates.

(*d*) Regular overtime to all those who work on Saturdays, except those mentioned in (*c*).

The recommendations were adopted by the house and approved by the planning board.

The good results of the cooperation of the management and 44-hour committee in the introduction of the shorter week suggested the idea of having a subcommittee of the wage rate committee meet with the heads of the standards department and note the methods of taking time studies and arriving at final standards, on which the bonus system is based. With this intimate contact the house is able to take more effective action on bonus questions that arise, while the management, as a result of this consultation and cooperation, is enabled to introduce its standards with more assurance of success.

Revision of the Bonus Rates.

IN the meantime the union renewed its attack on the company and the "industrial democracy." The bonus system was denounced as a device on the part of the capitalist owners to speed up the employees for the sake of profits, and the employees were warned that such speeding up meant premature old age and shortened lives for them. The accusation of the union came in for considerable discussion at the next meeting and both the house and the company agreed that there should be an investigation to settle this controversy one way or the other. A physiologist from Johns Hopkins was engaged to come and make the investigation. Considerable interest was manifested in the shop over this investigation and the subsequent report. Certain measures, like extension of the medical and dental service and improved equipments, were recommended in the report, but the charge that the bonus system was working injury to health and shortening the lives of employees was not sustained.

The controversy helped to bring the bonus question again to the forefront. The union had struck at the psychological hour when the company was revising the wage and bonus rates to conform to the 44-hour agreement. In the hurried recalculations of all these rates it was inevitable that errors would be made. Complaints about the bonuses were numerous and of every description, but this time instead of taking up individual cases, the wage rate committee went to the source of the trouble and collaborated with the planning board in devising a schedule that would be more satisfactory.

Under the agreement there was to be no reduction of any kind in weekly rates in the transition to the 44-hour week. None of the employees were willing to take a penny less. This temper the planning board did not seem to appreciate as keenly as it might at first, and so when it submitted the new bonus schedule providing increases for the first three classes[1] but a reduction of 4 cents a week on the fourth-class bonus, the committee promptly returned the schedule with its disapproval. The planning board sent back word

[1] For explanation of classes, see page —.

that the bonus rates would be "gone over again." Four proposals were submitted to the committee at its next meeting. In all four proposals the second and third class bonuses were the same amount. The alternatives lay with the first and fourth class bonuses. The first two proposals offered less than the existing weekly rate for the fourth-class bonus; the fourth proposal offered less for the first-class bonus. The committee chose the third proposal, which provided increases for the first, second, and third class bonuses, and the existing rate for the fourth class. Obviously, the committee acted upon the principle of the greatest good to the greatest number.

The old and new bonus rates stood as follows: Old bonus, 48-hour week: First class, $1.92; second class, $2.88; third class, $4.32; fourth class, $5.76; new bonus, 44-hour week: First class, $2.20; second class, $3.08; third class, $4.40; fourth class, $5.76.

This settled the production bonuses. But on the heels of this settlement the management came forward with another bonus proposal—a service bonus. It was to be based on the length of continuous service with the company. The wage rate committee was asked to prepare the new schedule of rates. After two weeks' consideration the committee submitted the following schedule, which was approved by the management:

	Weekly bonus.
3 to 5 years of continuous service	$0.50
5 to 10 years of continuous service	1.00
10 to 15 years of continuous service	2.00
15 years and up of continuous service	3.00

When these new schedules had been approved by the house they were posted in the shop, as is the custom. The employees were then able to figure out to what their service and production bonuses would amount. Some of the workers who were certain that they were going to get service bonuses were disappointed and complained to the committee. The committee began an investigation and found out that the difficulty had its source in the strikes of 1911 and 1918. The company took the position that those who struck had terminated their service records at that point and that when they came back their period of service began anew.

The committee was made the arbiter of the case. The question was, Did these strikes interrupt the continuous-service records of the strikers? Each side presented its contentions. The committee's decision sustained the company. The committee then requested that the service records of all employees be put at its disposal for investigating further grievances that might arise under this bonus.

Adjustment of Miscellaneous Complaints.

WITH the bonus question practically settled for the time, the committee turned to the numerous complaints that had accumulated respecting wage rates and time studies. Profiting by its experience, the committee decided to waive individual cases and have each department prepare a list of all its grievances. The opportunity seems to have appealed to several of the departments, as they submitted long bills of particulars. Some of the lists contained from

35 to 40 grievances. What appear to be the 10 leading grievances are noted:

1. Wages too low.
2. Standards too high; too few workers measure up to them, and consequently bonuses are difficult to earn.
3. Lack of uniformity in wages.
4. Bonuses are lost whenever new operations come in with changing styles.
5. Work not ready when workers call for it.
6. No time allowance for heavier garments.
7. Too long delays in attending to complaints.
8. Long delays at route boards.
9. Time allowances insufficient.
10. Losses in both wages and bonuses from transfers from one operation to another.

The committee then hit upon the idea of sending these bills of complaints to the management. This served to give the committee both sides of the controversy and, at the same time, to introduce the management to conditions and opinions in the departments. The management promptly replied with great detail. Many of the complaints were frankly acknowledged as valid and remediable, and promises were given that the causes for same would be removed and the existing grievances adjusted. Detailed explanation of the policies of the company smoothed out other grievances and showed that still others were unavoidable under the conditions and limitations of the industry. In the case of the long bill of grievances, the committee accepted in toto the management's response.

Further Revision of Wage Rates.

WITH the situation thus clarified and simplified the committee began the task of revising the rates. The workers were classified on the basis of "operations in the departments." Four classes were formed, named in a descending scale of difficulty, A, B, C, and D.

On July 15, 1919, the revised schedule of rates for women and girls was submitted to the house and made known among the employees affected. Dissatisfaction developed and the committee reconsidered its action. The second schedule showed many revisions in favor of employees, ranging from a few cents to $1.50 per week. A comparison of this with the preceding October's schedule shows increases ranging from $3 to $4 per week.

At the conclusion of its session on July 15, 1919, the committee notified the finishers, cutters, estimators, and sample tailors to have their representatives on hand the next day to present their cases. July 16 was a lively day. It was men's day. Representatives from all the departments invited were before the committee with their "kicks," with their "facts and figures," with "proofs" and "arguments" on their need of higher wages. There was competition among the departments for the higher rating and higher rates, and some evidences of jealousy. The cutters led off with the statement that they were getting the worst of it all round. One of their representatives said: "We have everything to lose and nothing to gain." The cutters were the most skilled and valuable workers in the shop, he said, but there was no recognition of it in the pay envelope. The representative of the estimators entirely disagreed with that. He wanted to know, if cutting was such a highly technical and skilled operation, why the cutters were always so anxious to get back to

cutting again when they were transferred to the estimators' department? The estimators were the real people of the shop and deserved the higher rating, he concluded. Then came the representative of the sample tailors who affirmed that his department contained the real skill of the shop. The fact that the sample tailors had to make the whole garment and make it right proved that their work was the most exacting and the most valuable. See what losses the company would suffer if it were not for the great skill of the sample tailors. This was too much for the estimators whose representative interrupted to point out what great losses the firm would suffer if they should make miscalculations. And so it went back and forth that day, a striking picture of group struggle within the ranks of the proletariat itself.

After these representatives had presented the respective cases (and judgments), the committee excused them and called in representatives of the company to get the management's rating of these departments as to skill. The committee was in doubt about the comparative skill of cutters and estimators, and questioned very closely the company officials on this point. The conclusion reached by the committee was that cutters and estimators were equally skilled and rated them so. The committee was inclined to rate the pressers slightly lower than the cutters, but as the company had been paying the same rates for both, that rating was not disturbed.

The wage schedules and recommendations of the wage rate committee were submitted to the house of representatives, which approved them. The management then gave its approval, and the new wage rates went into effect on July 23, 1919.

Allowances for Learning Time.

THERE remained the question of "allowances for learning time." When new operations are introduced, the question arises as to who shall pay for the time necessary to learn the new operation and as to how much time shall be allowed. There was some dissatisfaction with the existing time allowances, so the wage rate committee set out to prepare a definite schedule of "learning time" for the various kinds of operations.

The committee developed a schedule through actual tests in one department, and then tried its schedule in the other departments. When the schedule had been proved by tests, the committee and management embodied it in the following agreement:

1. Three times standard operation for the first day, two times the second day, and one and one-half the third day, when an employee is given a new operation.
2. Twice the standard time is allowed when, after 10 days or more, an operator is transferred back to former operation.
3. Operators transferred to lower grade of work are to be given one day to come up to normal. Twice the standard time is allowed for this day.
4. No learning time is to be allowed when the new operation requires less work or is easier than the operation it displaces, nor when new styles require same operation as in vogue.
5. Operators able to perform, in standard time, those new operations for which learning time is allowed are to receive 5 cents an hour in lieu of learning time allowance.

This agreement was sanctioned by the house and by the planning board.

The records of the house show a great falling off in the number of complaints after these several schedules went into effect. The wage

rate committee had met the problems and, on the whole, satisfactorily disposed of them.

Employees Desire a "Hand" as Well as a "Voice" in Management.

THIS shop organization was constructed upon the theory that what employees desire is a "voice" in their own affairs, a chance to "talk" and "air" their grievances. The house of representatives was designed particularly to serve this purpose. But a study of the records of these two years shows clearly that this group of employees desire a "hand" in their own affairs as well as a "voice."

Throughout the whole process of changes that have been passed in review there has been a progressively increasing participation by the employees in the making of policies and decisions that vitally concern them. The establishment of a wage rate committee marked the triumph of collective bargaining over the earlier policy of a collective economy dividend. With the passing of the senate, the house of representatives completed its evolution from a house of suggestion to a house of legislation. To-day the president of the house is a member of the planning board. In noting this gradual increase in the power and responsibilities of the employees, it should be remarked that the management has welcomed and encouraged this development.

The growing power of the employees is revealed again in the matter of discharges. When the case before the War Labor Board was pending the company agreed with the house not to discharge employees thereafter without first consulting the latter. Since the then management and house have adopted a set of rules prescribing the offenses that justify discharges. Now when the company wishes to discharge an employee it must go before the betterment committee (a standing committee of the house) and prove that the employee is guilty of one of these offenses. This committee is the jury in the case and decides the facts. The company must drop the action for discharge if the committee decides that the case has not been proved. But if the company wins, the employee may appeal to the board of review, upon which the house and management have equal voting power.

The necessities for prompt action in this clothing shop soon demonstrated the cumbersomeness of the machinery and methods borrowed from our Federal Government. Yet it should be recalled that the Leitch plan, while having the form of the United States Government, does not embody all its principles of representation. The changes that have augmented the power of the employees have been, at the same time, in the direction of direct and continuous contact of management and people. The legislative policy is still adhered to, but joint conferences precede legislative action. Legislative action becomes more a matter of ratification under this arrangement, although the house has the right to proceed independently.

This method of shop direction is proving a great school of experience for the employees, and for the management also. There is no denying the fact that this organization has to its credit a record of substantial achievement and that it is entitled to distinction among those who are introducing popular government in industry.

APPENDIX.

The following table gives the rates for male and female workers, effective July 23, 1919, the old rates, and the rates paid for similar work in the same city:

OLD AND NEW WAGE RATES PAID BY A LARGE CLOTHING FACTORY IN THE MIDDLE WEST COMPARED WITH RATES PAID FOR SIMILAR WORK IN SAME CITY UNDER WAR LABOR BOARD AWARD.

Males.

Operation.	Grade.	Old rate.		New rate.		Weekly rates under War Labor Board award.
		Hour.	Week.	Hour.	Week.	
Pressing and finishing	A	$0.73	$32.12	$0.85	$37.40	$35.00
	B	.71	31.24	.79½	34.98	34.00
	C	.65½	28.82	.73	32.12	31.00
Fore and machine	A	.65½	28.82	.73	32.12	30.00
	B	.60	26.40	.68	29.92	28.00
	C	.54½	23.98	.63	27.72	.....
Operating:						
Full skilled	A	.65½	28.82	.82	36.08	36.00
	B	.....	.....	.77½	34.10	34.00
Semiskilled	A	.....	.....	.69	30.36	30.00
	B	.....	.....	.61½	27.06	27.00
Cutting	A	.73	32.12	.85	37.40	37.00
	B	.....	.....	.....	.....	35.00
	C	.....	.....	.....	.....	33.00 29.00 25.00 23.00
Estimating	A	.79	34.76	[1] .91	[1] 40.04	38.00
Pattern grading	A	.79	34.76	[1] .91	[1] 40.04	38.00
Sample tailoring	A	.65½	28.82	.82	36.08	34.00
Minor operations	.....	.....	.....	.57	25.08	25.00

Females.

Machine operating	A	$0.48	$21.12	$0.57	$25.08	$25.00
Do	B	.42½	18.70	.51½	22.66	24.00
Do	C	.38½	16.94	.37½	20.90	20.00
Do	D	.35	15.40	.42	18.48	18.00
Hand work	A	.46	20.24	.55	24.20	23.00
Basting lining	A	.43½	19.14	.53	23.32	.....
Do	B	.40½	17.82	.47½	20.90	20.00
Do	C	.37	16.28	.44	19.36	.....
Felling lining	A	.35	15.40	.42	18.48	18.50
Do	B	.31	13.64	.38½	16.94	17.00
Tacking	A	.35	15.40	.42	18.48	18.50
Do	B	.31	13.64	.38½	16.94	17.00
Button sewing (machine)	A	.35	15.40	.42	18.48	18.50
Button sewing (hand)	.....	.31	13.64	.38½	16.94	17.00
Cleaning	.....	.27½	12.10	.32	14.08	.....
Bench work (pin)	A	.29½	12.98	.35	15.40	.....
Do	B	.27½	12.10	.32	14.08	.....
Marking	A	.29½	12.98	.35	15.40	.....
Do	B	.27½	12.10	.32	14.08	.....
Cutting, assemblers'	.....	.34½	15.18	.42	18.48	.....
Pin-ticketers fitters'	.....					
Pressing—parts	A	.41½	18.26	.57	25.08	23.00
Do	B	.49	21.56	.53	23.32	20.00
Do	C	.41½	18.26	.47½	20.90	.....

Minima on all operations.

First three months	.....	$0.27½	$12.10	$0.32	$14.08	$12.00
Second three months	.....	.31	13.64	.35	15.40	14.00
Third three months	.....	.....	.....	.38½	16.94	15.50
Fourth three months	.....	.35	15.40	.42	18.48	17.00

[1] Includes 6 cents bonus.

INDUSTRIAL RELATIONS.

Labor Principles of the National Association of Manufacturers.[1]

THE twenty-fifth annual convention of the National Association of Manufacturers was held in New York City in May, 1920. At this convention the association took definite action on two fundamental problems confronting the people: (1) Adopting a platform for American industry to be submitted to both the Republican and Democratic national conventions, and (2) declaring that "we are in hearty accord with all sensible efforts to reduce prices of commodities, and, to that end, we urge our members to cooperate in all reasonable efforts to bring about that result." This action, it is stated, places behind the movement to reduce the cost of essentials of living an organization with a membership of 5,700 of the leading manufacturers of the country, employing more than 6,000,000 workers and producing between 75 and 80 per cent of the total output of the manufactured products in this country.

The platform adopted by the convention is subdivided under the heads, Government and industry, Regulation of combinations, Private employment relations, Taxation and finance, Transportation, Immigration, Merchant marine, Foreign trade, and War bonus.

There are a number of references to relations between employers and employees and these are quoted in full as follows:

Regulation of combinations.—The right to organize and act in combination, whether by employer or employee, corporation or union, is relative and not absolute. It ends where injury to the public interest begins. This principle has been widely applied to the business combinations during a quarter century of regulation. The public interest now demands that it be equally applied, fairly but firmly, to all combinations.

The right to strike or lockout, which is merely an exercise of the right to act in combination, must be defined and limited wherever it conflicts with the community's paramount right of self-preservation. * * *

The public interest requires that the possession and exercise of power through combination shall be accompanied by corresponding responsibility. Every association, whether of employers or employees, must be equally subject to public authority and legally answerable for its own conduct and that of its agents.

The life of government is its power to function. The right of Government employees to adequate hearing and just and generous treatment must be amply protected, but the right of such employees to combine or stop or obstruct the operation of Government does not exist.

The paramount common interest in continuous public utility service empowers and obligates the Government to control all combination to paralyze or obstruct it and requires the ultimate submission of disputes threatening the interruption of such service to impartial adjudication without depriving the community of it.

To preserve equality before the law, the same principles of conduct must apply to all classes of citizens under like circumstances. To make or propose to make it right and lawful for one class of citizens to do that which is unlawful or criminal when done

[1] Data taken from American Industries for June, 1920, New York City, pp. 7-12.

by another class, or to prohibit or pretend to prohibit the use of public funds to enforce any law against an excepted group of possible offenders, is vicious. It should be condemned in principle and offending enactments repealed.

Private employment relations.—Quickened industrial production is essential to national prosperity. To obtain it requires the successful cooperation of management and men through right employment relations. Such relations are not made by legislation. They are a human growth and not a manufacture.

The parties must be free to make and maintain their own relationship, individually or collectively, in such form as is mutually satisfactory and in accordance with the size, nature, and varying circumstance of each particular establishment.

It is the primary duty of government to protect each person in his liberty to select and pursue any lawful business or occupation without molestation, to freely further his interest by legitimate agreements to be secure in the reward of his effort. The right to seek and establish employment relations with each other without respect to the membership or nonmembership of either in any organization is an essential part of the personal freedom of employer and employee.

The necessary regulation of employment relations in public service, an undeniable field of governmental authority, may profitably indicate through the experience thus derived the manner and extent through which further public approach may be made with practical success in the region of private employment disputes, seriously affecting the operation of industries upon which the life of the community depends. Failure to perform the plain duty to enforce public order has often permitted slight disturbances from these causes to assume serious proportions. A great step forward will be the general realization and acceptance by employer and employee of the social responsibility of their business or job.

Immigration.—We believe it is in the interest of the nation to replace our present unsystematic control of the alien with a constructive policy of selective immigration. The general prohibition of immigration is the counsel of bigotry or selfishness.

Ourselves a nation of immigrants and descendants of immigrants, we ought, in the words of Madison, to welcome every "person of good fame that really meant to incorporate himself into our society," but repel all who will not be "a real addition to the wealth or strength of the United States." To this end, we should effectively exclude the diseased, the criminal, the defective, those likely to become a charge on the public, any who oppose all forms of government or who would overthrow this Republic, or effect political change by force.

Our policy should distinguish the requirements for admission from those for naturalization, demanding a working knowledge of English and a practical understanding of our form of government, as a prerequisite to citizenship, and surrounding the bestowal of that high privelege with appropriate ceremonial.

Through official foreign agencies of our own we should systematically secure accurate information of the character and qualification of alien applicants for admission and to the fullest extent practicable approve or reject them before embarkation. We should supervise the distribution of the immigrant through systematized, official and private cooperation and accurately acquaint them with employment opportunities that both the agricultural and industrial needs of the nation may be met. Through the same agencies the processes of assimilation may be greatly aided. When the desire and qualification of the alien for citizenship is fully established, naturalization should be facilitated through uniform Federal legislation.

War bonus.—The simplest considerations of justice and gratitude require generous provision for the dependents of those who died for their country. Speedy and adequate relief in terms of their immediate need should be provided for those in whole or part physically incapacitated for military service and for their dependents.

We favor reasonable governmental assistance to those serving in the Army or Navy during the Great War, who may make application for and prove their need of such assistance, because of direct loss arising from their military service.

Our permanent public policy toward the soldiers and sailors of the Great War should be one of aid extended in such manner as to make those who require or seek it self-sustaining. Educational opportunities, whether technical or general, and the chance to build and acquire homes on Government land should be open to them on the most favorable terms. The general and indiscriminate distribution of a cash bonus is not justifiable. It would tend to lessen the inspiration and debase the motive of national service. It would be a positive harm to many individuals, and at this critical time would dangerously overstrain our heavily burdened economic structures.

Declaration of Labor Principles.

IN THIS connection it is pertinent to include the declaration of labor principles adopted by the National Association of Manufacturers in 1919 and published in succeeding issues of American Industries:

1. Fair dealing is the fundamental and basic principle on which relations between employers and employees should rest.
2. The National Association of Manufacturers is not opposed to organizations of labor as such, but it is unalterably opposed to boycotts, blacklists, and other illegal acts of interference with the personal liberty of employer or employee.
3. No person should be refused employment or in any way discriminated against on account of membership or nonmembership in any labor organization, and there should be no discriminating against or interference with any employee who is not a member of a labor organization by members of such organizations.
4. With due regard to contracts, it is the right of the employee to leave his employment whenever he sees fit, and it is the right of the employer to discharge any employee when he sees fit.
5. Employers must be free to employ their work people at wages mutually satisfactory, without interference or dictation on the part of individuals or organizations not directly parties to such contracts.
6. Employers must be unmolested and unhampered in the management of their business, in determining the amount and quality of their product, and in the use of any methods or systems of pay which are just and equitable.
7. In the interest of employees and employers of the country, no limitation should be placed upon the opportunities of any person to learn any trade to which he or she may be adapted.
8. The National Association of Manufacturers disapproves absolutely of strikes and lockouts, and favors an equitable adjustment of all differences between employers and employees, by any amicable method that will preserve the rights of both parties.
9. Employees have the right to contract for their services in a collective capacity, but any contract that contains a stipulation that employment should be denied to men not parties to the contract is an invasion of the constitutional rights of the American workman, is against public policy, and is in violation of the conspiracy laws. This association declares its unalterable antagonism to the closed shop, and insists that the doors of no industry be closed against American workmen because of their membership or nonmembership in any labor organization.
10. The National Association of Manufacturers pledges itself to oppose any and all legislation not in accord with the foregoing declaration.

Plan for Settlement of Jurisdictional Claims in the Building Industry.

AT ITS annual convention in 1919 the Building Trades Department of the American Federation of Labor adopted a plan to settle disputes over work that is claimed by more than one building trade. This is effected through a board known as the National Board for Jurisdictional Awards in the Building Industry "to hear claims for jurisdiction over work performed by building trades, and to determine by which trade the work in contention shall be performed and to make an award in conformity with the facts submitted by the contendents." No sympathetic strike because of a jurisdictional claim is permitted. The board has been functioning for some months and has rendered a number of decisions. It consists of eight members, three selected by the Building Trades Department of the American Federation of Labor and one each by the American Institute of Architects, the Engineering Council, the

Associated General Contractors of America, the National Association of Builders' Exchanges, and the National Building Trades Employers' Association. The headquarters of the board are in Washington, D. C. The following excerpt from a pamphlet giving recent decisions of the board, illustrates the nature of the claims passed upon:

Erection of scaffolds as applied to building construction.

[Subject of dispute between the International Hod Carriers, Building and Common Laborers' Union, United Brotherhood of Carpenters and Joiners, Operative Plasterers and Cement Finishers' International Association, and Bricklayers, Masons, and Plasterers' International Union.]

Decision.—In the matter of the dispute between the laborers, bricklayers, plasterers, and carpenters over the erection of scaffolds as applied to building construction, it is agreed that the erection and removal of all scaffolds, including trestles and horses used primarily by lathers, plasterers, bricklayers, and masons, shall be done by the mechanics and laborers in these trades, as directed by the employer.

Self-supporting scaffolds over 14 feet in height or any special designed scaffold or those built for special purposes shall be built by the carpenters.

The making of horses and trestles other than temporary is the work of the carpenter.

The full text of the plan as adopted by the Building Trades Department is as follows:

ARTICLE 1. There is hereby created for this purpose a board which shall be known as the National Board for Jurisdictional Awards in the Building Industry.

ART. 2. The duties of the board shall be to hear claims for jurisdiction over work performed by building trades, and to determine by which trade the work in contention shall be performed, and to make an award in conformity with the facts submitted by the contendents. At least a two-thirds majority of the voting members of the full board shall be required to render an award in all cases.

ART. 3. The board shall have the power to investigate all disputes and to make awards in accordance with its findings, as hereafter provided.

ART. 4. The board may appoint committees composed of its members to investigate any case brought to its attention. The report of such a committee shall be made to the board within thirty days from date of appointment.

ART. 5. All complaints must be submitted to the board in writing by the party or parties in interest, through the officials of an organization which is a party to this agreement, stating clearly the exact nature of the work in contention and they shall have the right to submit, through such persons as they may select, all evidence or arguments they may consider pertinent, in which case a hearing shall be given at the next meeting, and an award shall be made after the hearing of the evidence.

ART. 6. Should the board fail to make an award an umpire may be agreed upon, whose findings shall be final. Should the board, by a two-thirds majority, be unable to agree upon an umpire, the Secretary of the United States Department of Labor shall be called upon to name the umpire.

ART. 7. Awards by the board may be reopened and reheard upon the submission of new evidence at the request of any of the parties in interest, provided that at least six members of the board vote favorably on allowing a rehearing. Pending a rehearing the award made shall remain in force and effect.

ART. 8. When a dispute arises the employer to whom the work has been given shall proceed with such workmen as in his judgment he may see fit to employ pending a decision by the board; but the right of any contestant to the dispute shall not be prejudiced in its claim for a final award.

ART. 9. Each signatory to this agreement hereby agrees that the membership of that organization shall not take part in sympathetic strikes in any case of jurisdictional dispute.

Labor organizations signatory to this agreement shall secure the enforcement and compliance of their organizations with the provisions of this agreement and the awards of the board.

Local organizations refusing compliance with the provisions of this agreement and the awards of this board shall be suspended from their international organization, and the international organization shall proceed at once to man the job and the employer shall cooperate with the international organization in so doing.

Any architect, engineer, or employer represented on this board through an organization signatory to this agreement shall be suspended from his organization or organizations upon failure to comply with the provisions of this agreement and the awards of this board.

ART. 10. The decision shall govern the architects and engineers in writing specifications and the contractors in awarding contracts.

ART. 11. The board shall certify its awards to the officials of each of the organizations, parties hereto.

ART. 12. It shall be the duty of the officials of affiliated bodies, upon receiving such information, to instruct its members to carry out the decisions of the board and to use them as a guide in the conduct of their work.

ART. 13. In order to avert jurisdictional strife it is the recommendation of the board that new materials, specialties, and methods of application shall be passed upon by the board before being specified or used, provided that six members of the board shall have agreed that the subject has not been previously covered.

ART. 14. The board shall consist of eight members, three to be selected by the Building Trades Department of the American Federation of Labor, they to be international officials, and one each by the American Institute of Architects, the Engineering Council, the Associated General Contractors of America, the National Association of Builders' Exchanges, and the National Building Trades Employers' Association.

ART. 15. The term of office of members of the board shall be two years. Serving members shall be eligible for reelection.

ART. 16. Resignations and vacancies on the board shall be filled by the organizations from which the member or members were elected.

ART. 17. Compensation and expenses of members shall be determined by the organizations they represent. All routine expenses of the board shall be divided pro rata between the organizations selecting members of the board.

ART. 18. Each member if unable to serve shall select a substitute in his stead.

ART. 19. Not more than one member shall be elected by the Building Trades Department of the A. F. of L. from the same trade.

ART. 20. No member representing the Building Trades Department shall vote on an award in a dispute in which his own craft is involved nor shall any member employing one trade exclusively vote on any award in which that trade is a party at interest.

ART. 21. The officers of the board shall consist of a chairman, vice chairman and secretary-treasurer.

ART. 22. The chairman and vice chairman shall be chosen from the duly accredited representatives and shall be elected by a majority vote of the board. The secretary-treasurer shall be appointed by the board and shall serve with voice, but no vote.

The officers shall be elected at the first regular meeting in August and shall serve for a period of one year or until their successors have been duly qualified.

ART. 23. The headquarters of the board shall be in Washington, D. C. Meetings may be held elsewhere at the option of the board.

ART. 24. The board shall meet on the first Mondays in August, November, February and May, or upon the call of the chair.

ART. 25. Rules and regulations to cover necessary parliamentary procedure may be adopted at any regular session of the board, by a majority vote.

ART. 26. Amendments or additions to this plan may be submitted at any time to the organizations parties to the plan, for adoption, a majority to decide the questions submitted.

ART. 27. The parties hereto bind themselves individually and severally to abide by the decisions of the board as herein created.

Industrial Conditions in Japan.

IN A report upon "Japanese labor"[1] published this year by the British Foreign Office, Mr. Oswald White, British vice consul at Osaka, discusses in some detail the important aspects of the present status of industrial workers in Japan. The memorandum

[1] Great Britain. Foreign Office. Report on Japanese labor, by Mr. Oswald White. London, 1923. 42 pp. [Cmd. 511.]

deals with both factory and domestic labor and examines as far as possible the effect of existing conditions upon the labor problem.

The factory system in Japan is of comparatively recent origin. Forty years ago everything was made under the domestic system. During this period factories have sprung up, especial progress having been made since the Russo-Japanese War and particularly during and since the World War. As a result of this rather recent and rapid development of Japanese industry skilled labor has been scarce; unskilled labor has been plentiful, and, therefore, cheap. The factories are obliged to start with absolutely unskilled labor and train it. This oversupply of unskilled labor together with other industrial and social conditions has increased the manufacture of cheap goods and led to the payment of low wages.

Hours.

IN THE factories the hours are long. Overtime is universal and and extensive. During the war even the large normal amount of overtime was increased.

In 1916 an attempt was made to protect the rights of the workers through the passage of a factory law. By this law normal working hours are fixed at 12 per day, but this limitation need not be observed in factories employing only male operators over 15 years of age. Furthermore, it does not apply in factories employing fewer than 15 persons unless the work is dangerous or unhealthy. Nor does it apply to works not employing motive power or those in which the processes are of a simple nature. In the silk factories a 14-hour day is provided until 1931. No minor under 15 and no female may be employed between 10 p. m. and 4 a. m., but this restriction does not become effective until 1933 in factories where the night work is divided into two shifts, and cotton spinning mills are exempted until 1931. There is no provision for a weekly holiday but the law provides that during the period for which the exemptions just mentioned are in force workers must be granted from two to four holidays a month.

The modification of the eight-hour convention adopted by the International Labor Conference for Japan will, when ratified by the Japanese Government, constitute a great improvement in respect to the hours of labor.[2]

The most obvious results of the Japanese system of long hours are frequent absences on the part of workers and a tendency to idle a good deal of working time away. These are due in some cases to illness or fatigue, in others to the fear that production above a certain amount will cause the employers to lower the daily wages.

Wages and Cost of Living.

WAGES are low and many causes conspire to keep them so. As indicated at the beginning of this article, labor is plentiful' largely unskilled, and inefficient. The influence of the wretchedly low wages paid the women and children in the cottage industries, which are described later, is also felt. The competition existing

[2] MONTHLY LABOR REVIEW, January, 1920, p. 11.

between the domestic system and the factory system of manufacture, the almost total lack of labor-saving machinery, and the over-rapid expansion of industry, keep prices down and tend to lower wages paid by the factories.

During the war increased production created such a demand for labor that the supply was wholly inadequate to meet it. Consequently wages naturally rose until they were in some cases nearly double those paid in the prewar period. This is evident from the changes in average wages of cotton spinning operatives since 1914, published in May, 1919, by the Japanese Spinners' Association. A more detailed account of wage changes in Japanese industries is shown on pages 88 to 90 of this issue of the REVIEW.

CHANGES IN AVERAGE DAILY WAGES OF COTTON-SPINNING OPERATIVES, 1914 TO 1919.

[1 sen at par=0.5 cent.]

Year.	Average daily wages.	
	Males.	Females.
	Sen.	*Sen.*
1914; First half	48	31
Second half	48	32
1915; First half	39	32
Second half	48	31
1916; First half	49	33
Second half	50	33
1917; First half	51	35
Second half	57	39
1918; First half	62	43
Second half	79	51
1919; January-April	80	57

Increased wages, however, did not represent an increased buying capacity because the rise in cost of living in Japan more than offset any advantage derived from the wage increases. Rice, for instance, which constitutes the principal food of the lower class Japanese and of which the average workman consumes about $\frac{7}{10}$ sho (1 sho = $\frac{1}{5}$ peck) a day, rose in price from 18 sen (9 cents, par) per sho in 1916 to 45 sen (22.5 cents, par) in March, 1919. The effect of such an increase in a staple food may be inferred. Similar advances in the matter of rent, clothing, and sundries are also noted, especially in the industrial centers. The rent of a two-room house in 1914 was from 3 to 4 yen ($1.50 to $1.99, par) per month; in 1919 such a house rented for 6 to 10 yen ($2.99 to $4.99, par) per month.

An actual family budget submitted below is given as a typical example. This is the case of a man 48 years old, formerly a ship carpenter but now employed by a Government office in an outdoor capacity. His family consists of himself, his wife, and five children, four boys, aged 21, 19, 11, and 9 years, respectively, and one daughter aged 22 years.

Family income (monthly).

[1 yen at par=49.85 cents.]

	Yen.
Father	17
Eldest son	30
Second son	15
Daughter	20
	82

Monthly expenditure (averaged for 12 months).

	Yen.
Rice	40
Salt and soy	3
Other food	9
Sake and tobacco	7
Fuel	4
School fees	3
Clothes	5
Rent	5
	76
Balance for sundries	6
	82

In commenting upon this budget the author states that the expenditure for sake and tobacco are relatively high, while rent is low.

Another element entering into a consideration of the Japanese wage situation is the system of what is known as "bad taxes." These are taxes levied upon sake, soy, textile consumption, sugar consumption, drugs, transit, petroleum, the salt monopoly, and the import duty on rice, which bear heavily upon the working classes and constitute an important item in raising the cost of living.

Under the factory law of 1916 workers injured through no fault of their own are entitled to relief in the form of half wages for three months and one-third after that period. In addition, a disabled workman is entitled on recovery to compensation varying from 30 to 170 days' wages, and in case of death 170 days' wages, or at least 10 yen ($4.99, par) must be paid his family for funeral expenses.

The following table compiled from statistics submitted in the report shows the number of operatives in Japanese factories, by industry, sex, and age group for the year 1916. The author states that because of the difficulty in securing reliable figures for Japanese industry too much weight should not be attached to these statistics. They are nevertheless indicative of industrial conditions, showing the extent to which children under 15 are employed as operatives in factories and the extent to which females are employed.

NUMBER OF OPERATIVES IN FACTORIES IN JAPAN IN SELECTED INDUSTRIES, BY AGE AND BY SEX, IN 1916.

Industry.	Over 15 years of age.		Under 15 years of age.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.
Textile	92,386	460,735	4,734	81,683	97,120	542,418
Machine and tool	135,049	9,340	4,238	850	139,287	10,190
Chemical	80,177	33,513	6,370	5,220	86,547	38,733
Food and drink	45,107	8,371	762	549	45,869	8,920
Miscellaneous	64,024	29,448	4,575	4,452	68,599	33,900
Electrical	3,111	9			3,111	9
Gas	1,559	61	5		1,564	61
Metal refineries	16,552	1,912	83	36	16,635	1,948
Total	437,965	543,389	20,767	92,790	458,732	636,179

The Domestic System.

THE domestic and the factory systems of manufacture exist side by side. Until recently most of the manufactured goods were made under the domestic system. At present the factories manufacture most of the goods designed for export, while manufacture of goods for home consumption constitutes what is known as the "cottage industries." Some of the goods designed for the foreign markets are still manufactured under the domestic system and only this class of goods is dealt with in the report.

The cottage industries are subsidiary industries for farmers and their families and for the poorer classes in small towns. While no statistics regarding these industries are available it is known that in practically all parts of Japan they occupy the spare time of women and girls whose household duties do not admit of their going out to work. The most important of these industries are silk reeling, cotton weaving, hosiery, match boxes, buttons, brushes, drawn work, lace making, plaiting of hemp and straw braids, beads, imitation pearls, and shell-button making. A few of the establishments employ as many as 30 workmen but most of them are small, consisting of only three or four persons.

The work is usually distributed through middlemen who are not under contract with the importers to produce the finished product. The articles thus manufactured are poor in quality, the prices are small, and wages paid are consequently low and constitute a serious drag upon factory wages.

Female and Child Labor.

A FEATURE of Japanese industry is the predominance of women and girls. An examination of the table shows that in textiles there are over five times as many women as men operatives and that of the total number of operatives women and girls represent more than 58 per cent. This percentage would doubtless be greatly increased if the number of women and girls employed in the cottage industries could be ascertained.

There is little competition between male and female labor. In factories the hard manual labor is usually done by men. In the coal mines in Kyushu, where female labor constitutes 40 per cent of the working force, women perform the same work as men. In farming districts they work side by side with them in the fields. The women in the cotton mills are young, their ages ranging from 16 to 22 years. They work in two shifts of 10 to 12 hours each. Their wages range from 25 sen (12.5 cents, par) in the case of beginners to 80 sen (40 cents, par) per day. Meals and dormitories are provided by the companies. Recently the more progressive operators have introduced welfare features in the way of hospitals, playgrounds, recreation halls, etc., for their workers. Under the factory law, as far as it goes, the advantages seem to be largely with the women. But it does not apply to industries employing fewer than 15 persons and the vast number of home workers are of course also excluded. Though night work for women and girls is proscribed by the law, spinning mills were exempted until 1931.

Labor Unions.

LABOR unions, the report states, do not at present exist. They are not illegal, but it appears evident that their formation is obstructed by the authorities. There is, however, an organization known as the Yuaikai (Friendly Society), originally organized as a buffer between capital and labor, which has recently come out definitely on the side of labor. Its objects are "to organize labor, and to obtain an amelioration of its working conditions by the education and assistance, monetary and otherwise, of the workmen, and to mediate in labor disputes." Another organization known as the Rodo Kyokai (Labor Association) aims to serve as a mediator between capital and labor. During the early months of 1919 there was a great awakening of public interest in the subject of labor, as a result of which a small group of politicians have approached the Government as to its attitude toward trade-unions. They plan after obtaining Government sanction (1) "to make a small beginning by the formation of trade-unions within the larger factories as an object lesson to the workmen and the management of smaller factories; (2) to form a labor society to study the experience of other countries, translate literature, and investigate actual conditions; (3) to assist the mobility of labor by the formation of labor exchanges in important centers."

Though there are no labor unions in our sense of the term, primitive guilds exist under the leadership of "bosses" who frequently act as foremen and also serve in the capacity of private labor exchanges. This control of employment gives the "bosses" considerable influence among the workmen, who are obliged to take up any quarrel for them at call. On the other hand they are bound to protect, to feed, or to find employment for the workmen in their guilds.

General Characteristics.

TAKEN by and large the author finds the Japanese workman possessed of great endurance, to be docile, cheerful, and willing. He is imitative, learns quickly, and on detailed or routine work is as good and efficient as most workmen. Initiative and constructive ability are, however, almost entirely lacking among his characteristics, and for this reason he requires constant supervision. Manual dexterity is common though often accompanied by inaccuracy. There is a tendency to ignore essentials and to waste time. Whether his faults are inherent or the result of a system of low wages and of fatigue due to long hours is hard to say. The fact remains that the Japanese in business for himself is a marvel of industry.

Labor Conditions on Czecho-Slovakia Railroads.

AN ACCOUNT of the efforts of the Czecho-Slovakia National Assembly to rehabilitate the railroads of the Republic by the appropriation of 6,481,050,000 crowns ($1,313,060,730, par) and a statement showing railway operation costs and the budget

for 1920, together with other information of interest in this connection, is contained in Commerce Reports (Washington) for July 1, 1920, the article bearing date of April 30. An interesting portion of this account is a statement on labor conditions made by the Ministry of Railways which refers to the increased efficiency of employees, the small number of strikes occurring, and the increases in wages and salaries which have been granted since 1913. The ministry's statement is as follows:

During the war and also after the revolution the efficiency of the employees decreased considerably. The reasons therefor were chiefly undernourishment, troubles in securing food, and political events, as well as general disinclination of the returned soldier to work. When the principal demand of the workmen, the eight-hour working day, was granted an immediate improvement was noticed.

An additional improvement in the efficiency of the workmen was attained by a new adjustment of wages in accordance with the law of October 7, 1919, as well as by the granting of various extra payments and allowances to the employees engaged in especially arduous, dangerous, and responsible work.

The cooperation of the organizations of the railway men in the solution of the principal questions relating to railway men has had an especially favorable influence on the efficiency of the workmen.

As proof of the steady improvement of labor conditions it is proper to mention the fact that there have been no strikes to seriously threaten railway traffic, with the exception of a short cessation of work, which was, however, only of a local character. In Slovakia only one serious strike took place, and that was brought on during the Hungarian invasion, through the agitation of the Magyars.

The retention of the piecework system has contributed to the continued improvement in the employees' efficiency. At the present time there are about 54,830 permanent employees and about 95,670 temporary employees, or a total of about 150,000. In 1913 there were about 50,000 permanent employees and about 85,000 temporary employees, or a total of about 135,000 employees. This increase of 10 per cent in the number of employees is due to the establishment of new central offices, the creation of a reserve and trained personnel for Slovakia, and to the eight-hour law.

Increases in wages and salaries.

In 1913 the wages and salaries were 900 to 12,000 crowns [$182.34 to $2,431.20, par], according to preparatory education, employment, and years of service, with increases of 200 to 2,000 crowns [$40.52 to $405.20, par]—in the lower positions after two to three years, and in the higher positions after three to five years. Rent allowances of 360 to 1,760 crowns [$72.94 to $356.58, par], according to grade of employment and local living conditions, were also made.

In 1920 the wages and salaries range from 2,100 to 14,208 crowns [$425.26 to $2,878.54, par], with allowances for rent of 1,050 to 4,000 crowns [$425.46 to $810.40, par], according to preparatory education, character of employment, and number of years in service. Increases are made after two years in the lower grades and after three years in the higher. Permanent contributions for increased cost of living of 900 to 6,348 crowns [$182.34 to $1,286.10, par], according to the amount of wages and the number of children, are also made.

Special contributions for increased cost of living are 720 crowns [$145.87, par] for Greater Prague and 540 crowns [$109.40, par] for other places, per person, without distinction. Quarterly contributions for increased cost of living are from 180 to 990 crowns [$36.47 to $200.57, par], according to the amount of wages and number of children. From April 1 to August 31, 1920, this extra allowance will be paid monthly in conformity with the law.

The remuneration consists, therefore, of a basic sum with several supplementary amounts which have been granted from time to time.

German Agricultural Council's Program.

THE German Agricultural Council has adopted the following guiding principles for an economic program for 1920–21 according to a report in Die Konjunktur (Berlin) for April 29, 1920:

The German Agricultural Council expects from the new Central Ministry of Food and Agriculture that the promotion of agricultural production will at last be recognized by the German Government and the governments of the Federal States as a most important task in the rehabilitation of Germany's economic life. Steps should be taken immediately for the execution of a bold agricultural program.

Without prejudice to the systematic application of the German settlement act of August 11, 1919, attention must again be called to the fact that the compulsory partition of the large estates would have a disastrous effect on the food supply, for even the surrender of land to existing small agricultural establishments has already resulted in frequent stoppages in production.

The German Agricultural Council, in concert with all concerned in agriculture, continues to hold the view that state control should be abolished as soon as possible. It expects that at least a start will be made in this direction in the agricultural year 1920–21.

The production of artificial fertilizers and the importation of phosphates must be increased by every possible means. The fertilizers must be placed at the disposal of farmers at reasonable prices, if necessary with the aid of State funds. The present prices of fertilizers are unreasonable; they are out of all proportion to the prices of agricultural produce; the present level of fertilizer prices directly handicaps production.

Fodder stuffs are to be imported on as large a scale as possible. Those produced at home (bran, dried residues of sugar beet, etc.) are to be placed at the service of the farmers at adequate prices.

For the care of the root crops and especially of the sugar-beet cultivation the help of skilled foreign itinerant workers will still be urgently needed for a measurable time to come.

The maintenance and augmentation of food production are jeopardized by the curtailment of working hours.

The German Agricultural Council demands in detail:

Grain.—The public administration of bread grain should be maintained until better home crops and better facilities for imports from abroad permit of the accumulation of stocks within the country, so as to avert any sudden shortage or excessive fluctuation in prices. Agriculture, however, will be able to express its approval of the State control of bread grain of the 1920 crop in the interests of the community only when prices are so adjusted that the cultivation of grain will once more be remunerative and not, as at present, the most ungrateful task in the economic field. Fodder grain, barley, and oats are to be commandeered only to the extent of actual requirements; after surrender of the quota, the remainder is to be released for feeding the producers' own cattle. Bread grain and quantities of barley and oats not subject to surrender should be exchangeable for fertilizers and fodder stuffs so as to avoid as far as possible the importation of the expensive foreign wheat. Seed grain should be released from control. The standard price for grain should be computed on the basis of the prices of agricultural working mediums (coal, iron, fertilizers, fodder, etc.). The farmers must be guaranteed a voice in the fixing of prices. Adequate minimum prices should be guaranteed in due time, so that the farmers may be able to prepare their working program at the proper time.

Legumes.—Legumes should be commandeered on the smallest possible scale at prices which must bear the proper ratio to the uncertainty of the yield; the rest must be left at the free disposal of the producer.

Potatoes.—The State control of potatoes has proved a failure. Acreage and yield per hectare have declined to an alarming extent. It is of the first importance that production of potatoes should be increased, this being the simplest way to improve and secure the supply of food for the population and of fodder for the cattle. Potatoes, must, therefore, be removed from control; the conclusion of delivery contracts between the organizations of producers and consumers is to be encouraged as a transitional measure. The cultivation and supply of good seed potatoes must be promoted by every available means; the irksome regulations in the seed trade must be abolished,

since they hamper the extension of potato growing, especially in small agricultrual undertakings.

Sugar beet.—The cultivation and distribution of sugar beet are in all circumstances to be released from control.

Milk and dairy products.—The production of milk has further declined, owing partly to the increased slaughtering of cows and partly to the extraordinary shortage of fodder. The prices of milk and dairy products are, in spite of the last considerable advance, still materially below the cost of production and must, like the grain prices, be adjusted to the prices of the working mediums from time to time. Control of milk and dairy products should be maintained for the time being in the interests of infants, prospective mothers, and invalids. As a stimulus to increased milk production, albuminous fodder stuffs should be placed at the disposal of the farmers on a much larger scale than hitherto, as premiums for good milk deliveries, or perhaps in exchange for grain.

Live stock.—The State control of live stock has in many instances broken down. For a long time back no hogs have been delivered to the authorities. For its meat supply the population has to rely almost exclusively upon illicit methods. Hog stocks should be released. Contracts for fattening and delivery contracts should be encouraged.

Oil-bearing and fibrous plants.—The retention of control for these products can be agreed to for the present, provided that the prices of the raw product are adjusted to those of the manufactured articles.

In drawing up the economic program the cooperation of agricultural experts from the circles of small and average holdings shall be duly and extensively enlisted.

The German Agricultural Council recognizes plainly that the uninterrupted upward movement of all prices must, in the long run, lead to the economic ruin of large masses of the people. It must, however, protest against the view that only the prices of agricultural products are to be controlled and kept down because they are foodstuffs, while the prices of all articles of common use are permitted to soar without any restriction. It demands that, in the national and social interests of the people a limit should be set to the unheard-of profiteering in all quarters, an end made of the inflated paper finance, and international agreements concluded so as to improve the German exchange.

German Government's Measures.

THE German Minister for Food and Agriculture, Dr. Hermes, has issued an appeal[1] to the farmers to speed up their deliveries of grain and potatoes. He promises to take measures for the importation of raw phosphates and fodder stuffs. The importation of 1,000,000 tons of maize for hog fattening is assured. Larger imports of oil cake and other feeding stuffs are expected in the immediate future. The production of nitrates is to be brought up to the highest possible level. Minimum prices have been fixed for grain, potatoes, and oil seeds based on the cost of production in January, 1920. An index commission representing farmers and consumers is to be formed within the Ministry for Food and Agriculture, which will ascertain the increase in the cost of production since January and fix the additions to be made to the published minimum prices.

[1] Frankfurter Zeitung. Frankfort-on-the-Main, Apr. 29, 1920. Second edition.

PRICES AND COST OF LIVING.

Retail Prices of Food in the United States.

THE following tables are based on figures which have been received by the Bureau of Labor Statistics from retail dealers through monthly reports of actual selling prices.[1]

Table 1 shows for the United States retail prices of food on May 15 and June 15, 1920, and on June 15, 1919, as well as the percentage changes in the month and in the year. For example, the price of potatoes in June, 1919, was 3.8 cents; in May, 1920, 9.6 cents; and in June, 1920, 10.3 cents. The figures show an increase of 171 per cent in the year and an increase of 7 per cent in the month. The cost of 22 articles combined [2] increased 19 per cent in the year and 2 per cent in the month.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JUNE 15, 1920, COMPARED WITH JUNE 15, 1919, AND MAY 15, 1920.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (−) June 15, 1920, compared with—	
		June 15, 1919.	May 15, 1920.	June 15, 1920.	June 15, 1919.	May 15, 1920.
		Cents.	*Cents.*	*Cents.*		
Sirloin steak	Pound	43.1	43.4	46.1	+ 7	+ 6
Round steak	do	40.4	39.9	42.6	+ 5	+ 7
Rib roast	do	33.8	33.4	34.8	+ 3	+ 4
Chuck roast	do	28.1	26.5	27.8	− 1	+ 5
Plate beef	do	21.0	18.8	19.0	− 10	+ 1
Pork chops	do	42.4	42.5	40.8	− 4	− 4
Bacon	do	57.2	52.6	53.9	− 6	+ 2
Ham	do	55.2	55.5	58.6	+ 6	+ 6
Lamb	do	38.4	42.1	41.5	+ 8	− 1
Hens	do	42.6	47.1	46.0	+ 8	− 2
Salmon (canned)	do	32.0	37.1	38.1	+ 19	+ 3
Milk, fresh	Quart	14.9	16.2	16.2	+ 9	0
Milk, evaporated (unsweetened)	15-16 oz. can	15.4	14.7	15.0	− 3	+ 2
Butter	Pound	63.3	71.6	67.2	+ 6	− 6
Oleomargarine	do	41.4	43.3	42.8	+ 3	− 1
Nut margarine	do	35.4	36.5	36.0	+ 2	− 1
Cheese	do	42.4	42.9	41.8	− 1	− 3
Lard	do	40.2	29.8	29.3	− 27	− 2
Crisco	do	35.3	37.2	36.6	+ 4	− 2
Eggs, strictly fresh	Dozen	53.5	52.9	53.6	+ 0.2	+ 1

[1] In addition to retail prices of food, the Bureau secures prices of coal, gas, and dry goods from each of 51 cities, and publishes these prices as follows: Coal, in the March and September issues of the MONTHLY LABOR REVIEW; gas, in the June issue; dry goods, in the April, July, October, and December issues.

[2] The following are the 22 articles, weighted according to the consumption of the average family: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, hams, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, tea. These include all articles for which prices have been secured each month since 1913 with the exception of lamb, for which the bureau has no consumption figures.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JUNE 15, 1920, COMPARED WITH JUNE 15, 1919, AND MAY 15, 1920—Concluded.

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (−) June 15, 1920, compared with—	
		June 15, 1919.	May 15, 1920.	June 15, 1920.	June 15, 1919.	May 15, 1920.
		Cents.	*Cents.*	*Cents.*		
Bread	Pound	9.9	11.5	11.8	+ 19	+ 3
Flour	do	7.5	8.7	8.8	+ 17	+ 1
Corn meal	do	6.3	6.7	6.9	+ 10	+ 3
Rolled oats	do	8.5	10.5	10.5	+ 24	0
Corn flakes	8-oz. package	14.0	14.1	14.3	+ 2	+ 1
Cream of Wheat	28-oz. package	25.1	30.1	30.2	+ 20	+ 0.3
Macaroni	Pound	19.3	20.7	20.9	+ 8	+ 1
Rice	do	13.8	18.7	18.7	+ 36	0
Beans, navy	do	12.1	11.8	11.8	− 2	0
Potatoes	do	3.8	9.6	10.3	+171	+ 7
Onions	do	11.2	8.0	8.1	− 28	+ 1
Cabbage	do	6.8	8.4	7.4	+ 9	−12
Beans, baked	No. 2 can	17.3	16.8	16.7	− 3	− 1
Corn, canned	do	19.1	18.6	18.6	− 3	0
Peas, canned	do	19.0	19.1	19.2	+ 1	+ 1
Tomatoes, canned	do	15.9	15.1	15.2	− 4	+ 1
Sugar, granulated	Pound	10.6	25.4	26.7	+152	+ 5
Tea	do	70.1	74.0	73.8	+ 5	− 0.3
Coffee	do	42.6	49.2	49.2	+ 15	0
Prunes	do	25.4	28.3	28.2	+ 11	− 0.4
Raisins	do	16.8	27.4	27.6	+ 64	+ 1
Bananas	Dozen	38.2	43.2	46.3	+ 21	+ 7
Oranges	do	54.4	71.8	63.9	+ 17	−11
22 weighted articles [1]					+ 19	+ 2

[1] See note 2, p 47.

Table 2 shows for the United States average retail prices of specified food articles on June 15 of each year, 1913 to 1920, together with the percentage change in June of each year compared with June, 1913. For example, the price of flour in June, 1914, was the same as in June, 1913. As compared with the price in June, 1913, the price in June, 1915, showed an increase of 30 per cent; in June, 1916, an increase of 18 per cent; in June, 1917, an increase of 145 per cent; in June, 1918, an increase of 103 per cent; in June, 1919, an increase of 127 per cent; and in June, 1920, an increase of 167 per cent.

The cost of 22 articles combined increased 124 per cent during the seven-year period.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE JUNE 15 OF EACH YEAR, 1914 TO 1920, COMPARED WITH JUNE 15, 1913.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail price, June 15—								Per cent of increase (+) or decrease (−) June 15 of each specified year compared with June 15, 1913.						
		1913	1914	1915	1916	1917	1918	1919	1920	1914	1915	1916	1917	1918	1919	1920
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.							
Sirloin steak	Lb.	25.9	26.3	26.1	28.8	32.8	42.6	43.1	46.1	+2	+1	+11	+27	+64	+66	+78
Round steak	Lb.	22.6	23.7	23.4	26.0	30.2	40.6	40.4	42.6	+5	+4	+15	+34	+80	+79	+88
Rib roast	Lb.	20.1	20.5	20.3	22.4	26.1	33.5	33.8	34.8	+2	+1	+11	+30	+67	+68	+73
Chuck roast	Lb.	16.3	16.7	16.4	18.1	21.9	29.5	28.1	27.8	+2	+1	+11	+34	+81	+72	+71
Plate beef	Lb.	12.2	12.5	12.2	13.4	16.6	22.7	21.0	19.0	+2	0	+10	+36	+86	+72	+56
Pork chops	Lb.	20.8	21.6	20.6	23.1	31.0	37.2	42.4	40.8	+4	−1	+11	+49	+79	+104	+96
Bacon	Lb.	27.3	27.0	26.8	28.8	42.6	51.5	57.2	53.9	−1	−2	+5	+56	+89	+110	+97
Ham	Lb.	27.3	27.0	26.1	29.6	39.1	46.5	55.2	58.6	−1	−4	+8	+43	+70	+102	+115
Lamb	Lb.	19.4	20.0	21.8	23.9	30.4	37.4	38.4	41.5	+3	+12	+23	+57	+93	+98	+114
Hens	Lb.	21.9	22.0	20.9	24.2	28.9	37.6	42.6	46.0	+0.4	−5	+11	+32	+72	+95	+110
Salmon (canned)	Lb.	.....	.....	20.0	20.2	26.3	29.6	32.0	38.1	.....	.....	.....	.....	.....	.....	.....
Milk, fresh	Qt.	8.8	8.9	8.8	8.8	10.6	13.0	14.9	16.2	+1	0	0	+20	+48	+69	+84
Milk, evaporated (unsweetened)	15–16 oz. can	.....	.....	.....	.....	.....	.....	15.4	15.0	.....	.....	.....	.....	.....	.....	.....
Butter	Lb.	35.2	33.5	34.6	36.4	47.1	51.1	63.3	67.2	−5	−2	+3	+34	+45	+80	+91
Oleomargarine	Lb.	.....	.....	.....	.....	.....	.....	41.4	42.8	.....	.....	.....	.....	.....	.....	.....
Nut margarine	Lb.	.....	.....	.....	.....	.....	.....	35.4	36.0	.....	.....	.....	.....	.....	.....	.....
Cheese	Lb.	21.8	22.7	23.4	24.5	33.8	33.2	42.4	41.8	+4	+7	+12	+55	+52	+94	+92
Lard	Lb.	15.8	15.4	15.1	17.1	28.0	32.6	40.2	29.3	−3	−4	+8	+77	+106	+154	+85
Crisco	Lb.	.....	.....	.....	.....	.....	.....	35.3	36.6	.....	.....	.....	.....	.....	.....	.....
Eggs, strictly fresh	Doz.	27.9	28.2	26.8	30.0	41.1	42.5	53.5	53.6	+1	−4	+8	+47	+52	+92	+92
Bread	Lb.	5.6	6.2	7.2	7.0	9.6	10.0	9.9	11.8	+11	+29	+25	+71	+79	+77	+111
Flour	Lb.	3.3	3.3	4.3	3.9	8.1	6.7	7.5	8.8	0	+30	+18	+145	+103	+127	+167
Corn meal	Lb.	2.9	3.1	3.3	3.2	5.5	6.7	6.3	6.9	+7	+14	+10	+90	+131	+117	+138
Rolled oats	Lb.	.....	.....	.....	.....	.....	.....	8.5	10.5	.....	.....	.....	.....	.....	.....	.....
Corn flakes	8-oz. pkg.	.....	.....	.....	.....	.....	.....	14.0	14.3	.....	.....	.....	.....	.....	.....	.....
Cream of Wheat	28-oz. pkg.	.....	.....	.....	.....	.....	.....	25.1	30.2	.....	.....	.....	.....	.....	.....	.....
Macaroni	Lb.	.....	.....	.....	.....	.....	.....	19.3	20.9	.....	.....	.....	.....	.....	.....	.....
Rice	Lb.	8.6	8.7	9.1	9.1	10.9	12.5	13.8	18.7	+1	+6	+6	+27	+45	+60	+117
Beans, navy	Lb.	.....	.....	7.6	9.6	19.5	17.5	12.1	11.8	.....	.....	.....	.....	.....	.....	.....
Potatoes	Lb.	1.8	2.2	1.7	2.8	6.2	2.9	3.8	10.3	+22	−6	+56	+244	+61	+111	+472
Onions	Lb.	.....	.....	4.0	5.4	7.0	4.8	11.2	8.1	.....	.....	.....	.....	.....	.....	.....
Cabbage	Lb.	.....	.....	.....	.....	.....	.....	6.8	7.4	.....	.....	.....	.....	.....	.....	.....
Beans, baked	#2 can	.....	.....	.....	.....	.....	.....	17.3	16.7	.....	.....	.....	.....	.....	.....	.....
Corn, canned	#2 can	.....	.....	.....	.....	.....	.....	19.1	18.6	.....	.....	.....	.....	.....	.....	.....
Peas, canned	#2 can	.....	.....	.....	.....	.....	.....	19.0	19.2	.....	.....	.....	.....	.....	.....	.....
Tomatoes, canned	#2 can	.....	.....	.....	.....	.....	.....	15.9	15.2	.....	.....	.....	.....	.....	.....	.....
Sugar, granulated	Lb.	5.3	5.1	6.9	8.7	9.4	9.1	10.6	26.7	−4	+30	+64	+77	+72	+100	+404
Tea	Lb.	54.4	54.7	54.4	54.6	56.7	64.8	70.1	73.8	+1	0	+0.4	+4	+19	+29	+36
Coffee	Lb.	29.8	29.7	30.0	29.9	30.1	30.2	42.6	49.2	−0.3	+1	+0.3	+1	+1	+43	+65
Prunes	Lb.	.....	.....	13.3	13.0	15.7	16.6	25.4	28.2	.....	.....	.....	.....	.....	.....	.....
Raisins	Lb.	.....	.....	12.6	12.7	14.6	15.1	16.8	27.6	.....	.....	.....	.....	.....	.....	.....
Bananas	Doz.	.....	.....	.....	.....	.....	.....	38.2	46.3	.....	.....	.....	.....	.....	.....	.....
Oranges	Doz.	.....	.....	.....	.....	.....	.....	54.4	63.9	.....	.....	.....	.....	.....	.....	.....
22 weighted articles.[1]	.....	.....	.....	.....	.....	.....	.....	.....	.....	+2	+4	+13	+55	+66	+88	+124

[1] See note 2, p. 47.

Relative Retail Prices of 22 Articles of Food.

IN TABLE 3 the average monthly and yearly prices of 22 food articles[3] are shown as relative prices or percentages of the average prices for the year 1913. These relatives are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. Relative

[3] For list of articles, see note 2, p. 47.

prices must be used with caution. For example, the relative price of pork chops in November, 1919, was 200, which means that the money price was 200 per cent of the money price in 1913, or, in other words, the price doubled. The relative price of pork chops in December was 181, showing a drop of 19 points from 200, which is a decrease of only 9.5 per cent.

In the last column of this table are given index numbers [4] showing the changes by months and years in the retail cost of the 22 food articles weighted according to the importance of each article in the consumption of the average family. Prices are obtained each month for 43 food articles, but only 22 of these are included in the retail food price index, because the amounts consumed by the average family have been obtained as yet for only these 22 food articles. These articles comprise about two-thirds of the entire food budget of the average family and reflect with great accuracy changes in the cost of the food budget. The figure representing the cost of these 22 food articles was 215 in May and 219 in June. This shows that, as compared with 1913, the cost of these food articles was in May, 1920, more than double what it was in 1913, and that during the month from May to June there was an increase of 2 per cent in the cost of these articles.

The curve shown in the chart on page 54 pictures more readily to the eye the changes in the cost of the family market basket and the trend in the cost of the food budget than do the index numbers given in the table. The chart has been drawn on the logarithmic scale,[5] because the percentages of increase or decrease are more accurately shown than on the arithmetic scale.

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[4] For a discussion of the method used in the computation of these index figures, see MONTHLY LABOR REVIEW for March, 1920, p. 34.

[5] For a discussion of the logarithmic chart, see article on "Comparison of arithmetic and ratio charts" by Lucian W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 29-34. Also, "The 'ratio' chart," by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association, June, 1917, 24 pp.

TABLE 3.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907 TO JUNE, 1920.

Year and month.	Sirloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef.	Pork chops.	Bacon.	Ham.	Lard.	Hens.	Eggs.	Butter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Potatoes.	Sugar.	Coffee.	Tea.	22 weighted articles.
1907	71	68	76	.....	.....	74	74	76	81	81	84	85	.....	87	.....	95	88	.....	105	105	.....	.....	82
1908	73	71	78	.....	.....	76	77	78	80	83	86	86	.....	90	.....	102	92	.....	111	108	.....	.....	84
1909	77	74	81	.....	.....	83	83	82	90	89	93	90	.....	91	.....	109	94	.....	112	107	.....	.....	89
1910	80	78	85	.....	.....	92	95	91	104	94	98	94	.....	95	.....	108	95	.....	101	109	.....	.....	93
1911	81	79	85	.....	.....	85	91	89	88	91	93	88	.....	96	.....	102	94	.....	130	111	.....	.....	92
1912	91	89	94	.....	.....	91	91	91	94	93	99	98	.....	97	.....	115	102	.....	132	115	.....	.....	98
1913: Av. for year	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
January	94	92	95	93	92	89	94	93	97	95	108	107	100	100	100	100	99	99	91	106	100	100	98
February	94	93	95	93	93	90	95	94	98	97	91	108	100	100	100	100	98	99	90	100	100	100	97
March	97	96	98	98	98	97	97	97	99	100	77	108	100	100	100	100	98	99	88	99	100	100	97
April	101	99	101	101	101	103	99	99	100	104	73	106	100	100	100	100	98	99	87	98	100	100	98
May	101	100	101	101	101	100	100	99	100	104	76	94	99	99	100	101	98	99	91	97	100	100	97
June	102	101	102	102	101	99	101	102	100	103	81	92	99	99	100	101	98	99	104	97	100	100	98
July	104	104	102	103	101	103	104	104	101	102	87	91	99	99	100	101	98	100	110	100	100	100	100
August	104	104	102	103	101	104	105	106	102	101	96	92	100	99	100	100	100	100	109	102	100	100	101
September	103	104	101	103	102	108	104	104	102	101	109	98	100	100	100	100	102	100	110	104	100	100	102
October	101	104	101	103	102	107	103	102	101	100	120	100	101	101	100	99	103	100	106	101	100	100	104
November	100	102	100	102	102	102	101	100	101	97	144	101	102	102	100	99	104	100	107	99	100	100	105
December	99	101	100	101	102	97	99	99	100	98	138	104	102	102	100	99	104	100	106	98	100	100	104
1914: Av. for year	**102**	**106**	**103**	**104**	**104**	**105**	**102**	**102**	**99**	**102**	**102**	**94**	**104**	**100**	**112**	**104**	**105**	**101**	**108**	**108**	**100**	**100**	**102**
January	99	102	100	102	102	99	98	98	100	100	126	104	104	102	110	98	104	100	108	95	99	100	104
February	99	102	101	103	102	100	98	99	99	104	106	93	104	102	110	99	103	100	108	94	99	100	101
March	100	103	101	102	102	100	99	99	99	105	90	92	105	101	110	99	103	100	107	93	100	100	99
April	100	103	102	103	102	103	99	99	99	108	74	86	104	100	110	99	103	100	105	91	100	100	97
May	102	105	102	103	103	106	99	99	98	106	77	85	103	100	110	99	103	100	112	91	100	101	98
June	103	106	103	104	103	103	100	100	97	103	82	88	103	100	110	99	103	100	132	93	100	101	99
July	106	109	105	106	104	106	101	103	97	103	87	89	103	100	110	98	103	101	155	95	99	101	102
August	110	113	108	109	107	119	107	108	99	104	96	94	103	100	112	106	105	101	111	143	100	101	107
September	107	110	105	108	107	113	108	108	99	103	107	98	104	100	114	113	109	101	105	145	100	101	107
October	103	107	104	106	106	110	106	105	98	100	113	98	104	101	114	111	109	101	89	132	99	101	105
November	100	105	103	104	105	104	104	102	99	97	131	103	104	101	114	112	109	101	83	113	99	101	105
December	101	103	101	103	103	93	103	100	97	94	139	103	104	101	116	113	107	101	84	110	99	101	105
1915: Av. for year	**101**	**103**	**101**	**101**	**100**	**96**	**100**	**97**	**93**	**97**	**93**	**93**	**105**	**99**	**124**	**126**	**108**	**104**	**89**	**120**	**101**	**100**	**101**
January	100	102	101	101	102	88	101	98	97	95	129	101	105	101	120	124	109	104	85	110	101	100	103
February	98	100	100	99	101	85	99	96	97	97	98	98	106	100	126	138	110	104	84	118	101	100	101
March	97	99	99	98	100	85	98	95	96	99	74	94	106	99	126	136	110	104	82	120	101	100	98
April	99	100	100	99	100	94	98	94	96	100	75	94	105	99	126	137	109	104	86	122	101	100	99
May	101	103	101	101	101	99	98	95	96	101	76	91	106	98	128	139	109	104	89	124	101	100	100
June	103	105	103	103	101	98	98	97	95	98	78	90	106	98	128	130	109	104	99	126	101	100	100
July	105	107	104	103	101	100	100	98	93	97	81	90	105	98	126	125	108	104	85	127	101	100	100
August	104	107	104	103	101	103	100	98	89	97	88	88	103	99	126	124	108	104	82	123	101	100	100
September	104	106	103	102	101	107	100	97	88	97	101	88	103	99	124	117	108	104	79	118	100	100	100

TABLE 3.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907 TO JUNE, 1920—Continued.

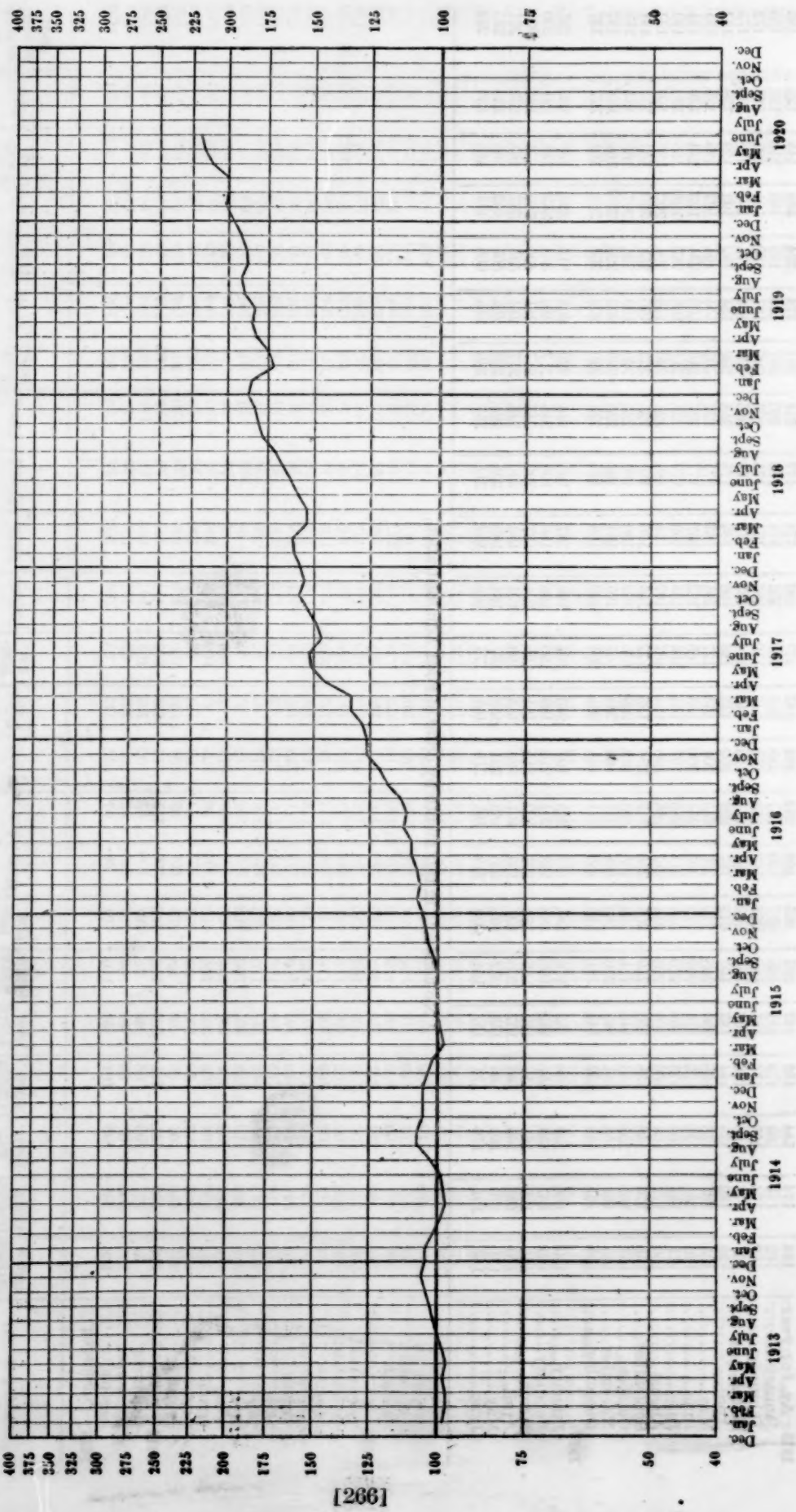
Year and month.	Sirloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef.	Pork chops.	Bacon.	Ham.	Lard.	Hens.	Eggs.	Butter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Potatoes.	Sugar.	Coffee.	Tea.	22 weighted articles.
1915—Concluded.																							
October	103	104	102	101	99	110	101	99	91	97	117	92	104	100	124	113	108	104	94	111	100	100	103
November	101	102	101	99	98	99	101	100	92	95	133	95	105	100	122	113	107	104	97	119	100	100	104
December	99	101	100	99	98	87	101	100	92	95	135	101	107	100	122	114	107	104	106	124	100	100	105
1916: Av. for year.	**108**	**110**	**107**	**107**	**106**	**108**	**106**	**109**	**111**	**111**	**109**	**103**	**117**	**102**	**130**	**135**	**113**	**105**	**159**	**146**	**100**	**100**	**114**
January	101	102	101	99	99	89	101	101	93	101	123	100	110	100	122	120	107	105	136	123	100	100	107
February	101	102	102	99	100	92	101	102	94	104	101	99	112	100	124	125	108	104	141	125	100	100	106
March	104	104	104	103	102	104	103	104	96	107	82	105	113	100	124	120	107	104	140	137	100	100	107
April	106	108	106	106	105	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	100	109
May	109	112	110	109	107	109	105	109	106	113	82	97	112	99	124	119	108	104	140	156	100	100	109
June	113	117	113	113	111	110	107	110	108	114	87	95	111	99	124	117	108	105	167	158	100	100	112
July	113	116	112	112	109	111	107	111	110	113	93	93	110	100	124	116	108	105	134	160	100	100	111
August	112	115	111	110	107	116	108	111	111	112	105	95	111	101	126	134	110	105	141	155	100	100	113
September	111	115	110	110	107	125	110	114	118	113	120	102	116	102	136	148	113	105	161	141	100	100	118
October	108	111	108	108	106	118	110	114	123	114	132	109	122	105	144	155	117	105	165	149	100	100	121
November	106	108	106	107	106	111	111	114	135	112	149	114	132	109	150	174	126	105	198	157	100	100	126
December	106	107	106	106	106	106	110	114	137	112	154	118	140	112	138	167	131	105	198	151	100	100	126
1917: Av. for year.	**124**	**130**	**126**	**131**	**130**	**152**	**152**	**142**	**175**	**134**	**139**	**127**	**150**	**125**	**164**	**211**	**192**	**119**	**253**	**169**	**101**	**107**	**146**
January	109	111	109	109	108	113	110	114	136	119	158	118	141	112	140	171	132	105	225	146	100	100	128
February	113	117	114	116	116	125	114	118	138	126	147	122	142	112	142	171	136	104	290	148	100	100	133
March	116	119	118	128	121	133	123	125	151	129	101	121	146	112	144	174	137	104	297	160	101	101	133
April	125	130	127	131	132	146	141	136	167	136	112	133	150	114	150	206	154	108	339	175	101	101	145
May	127	133	130	134	135	146	155	144	176	138	116	122	153	117	168	266	178	121	352	183	101	103	151
June	129	135	132	137	137	148	158	145	177	136	119	123	153	119	170	246	182	125	366	170	101	104	152
July	129	137	130	137	136	151	159	147	174	131	122	120	149	125	176	220	195	123	246	166	103	110	146
August	130	138	129	136	134	164	160	147	176	131	134	124	148	128	182	229	219	122	206	181	102	111	149
September	131	133	131	137	135	185	164	152	188	142	152	129	152	132	176	223	272	124	172	179	102	112	153
October	130	138	130	136	136	185	178	159	198	146	160	133	158	143	176	214	232	128	178	177	102	113	157
November	124	133	127	132	134	165	179	159	207	138	168	138	156	144	176	208	235	131	183	174	102	114	155
December	126	134	128	134	134	161	181	161	211	143	184	142	156	147	166	205	235	133	178	172	102	114	157
1918: Av. for year.	**153**	**165**	**155**	**166**	**170**	**186**	**196**	**178**	**211**	**177**	**165**	**151**	**162**	**156**	**175**	**203**	**227**	**148**	**188**	**176**	**102**	**119**	**168**
January	129	137	130	138	142	163	180	162	208	154	195	118	156	151	168	200	233	134	188	173	102	115	160
February	131	141	133	142	146	160	179	163	209	170	182	151	158	151	170	200	233	136	188	193	102	112	161
March	133	143	135	145	150	161	181	164	210	(1)	128	144	159	151	171	200	240	138	147	167	102	113	154
April	144	155	148	159	164	170	183	166	209	(1)	123	132	154	148	175	200	237	139	129	165	101	117	154
May	157	170	161	174	181	175	187	170	208	178	123	133	151	148	177	200	233	141	129	165	101	117	158
June	168	182	169	184	188	177	191	173	206	177	123	133	150	146	179	203	223	144	171	165	101	119	162
July	166	181	168	182	185	180	194	181	206	178	142	137	152	148	179	203	223	148	229	167	101	120	167
August	163	178	165	177	179	201	200	180	209	181	155	141	157	153	177	206	227	154	229	169	101	121	171
September	164	178	165	178	181	220	208	193	213	185	170	155	163	161	177	206	230	157	229	175	102	122	178
October	161	175	163	174	178	216	214	193	216	183	186	170	174	166	175	203	227	161	206	193	102	124	181
November	159	173	162	172	175	206	216	195	216	185	215	174	184	173	175	203	217	161	194	196	103	125	183
December	159	171	161	171	174	197	217	198	216	180	235	190	193	176	175	203	213	160	188	196	109	124	187

1919: Av. for year	**164**	**174**	**164**	**169**	**167**	**201**	**205**	**199**	**234**	**193**	**182**	**177**	**193**	**174**	**179**	**218**	**213**	**174**	**224**	**205**	**145**	**129**	**186**
January	162	175	165	175	181	193	217	199	211	188	218	184	201	175	175	200	207	159	188	196	117	127	185
February	162	174	165	174	181	180	205	193	203	186	147	149	185	174	175	203	200	164	182	195	123	126	172
March	165	177	169	178	183	184	203	191	211	193	140	174	183	172	175	206	197	154	171	193	126	129	175
April	172	182	175	184	187	197	212	197	223	202	143	186	190	169	175	218	200	154	182	193	129	128	182
May	175	187	178	186	186	205	210	203	246	204	154	177	191	167	175	227	207	154	194	193	136	128	185
June	170	181	171	176	174	202	212	205	254	200	155	165	192	167	177	227	210	159	224	193	143	129	184
July	171	183	169	173	168	220	215	211	266	197	164	164	195	169	179	227	217	168	282	198	155	130	190
August	166	177	164	166	160	223	214	212	266	196	174	167	197	174	180	224	220	178	294	202	160	130	192
September	161	170	158	158	150	219	206	205	242	194	183	172	195	176	180	221	223	190	253	200	164	130	188
October	157	165	155	153	145	211	196	195	228	189	209	186	192	180	180	221	220	199	224	207	163	131	189
November	155	162	153	151	143	200	189	188	231	184	235	197	195	184	182	224	220	202	229	227	164	131	192
December	154	161	153	152	143	181	186	186	221	184	261	204	196	188	182	233	220	202	253	264	164	127	197
1920:																							
January	159	166	159	158	152	178	186	187	215	197	240	194	196	187	195	245	220	208	318	324	165	132	201
February	160	167	159	157	152	180	186	188	204	210	199	190	196	188	198	245	217	210	353	342	165	131	200
March	161	168	161	157	150	186	186	190	192	215	161	196	194	187	200	242	217	211	400	340	165	135	200
April	170	179	169	166	157	206	191	199	191	224	153	199	194	183	200	245	217	214	535	367	165	135	211
May	171	179	169	166	155	202	195	206	189	221	153	187	194	182	205	264	223	215	565	462	165	136	215
June	182	191	176	174	157	194	200	218	185	216	155	175	189	182	211	267	230	215	606	485	165	136	219

[1] No hens sold in this month by order of Food Administration.

Trend in retail cost of 22 food articles, combined, for the United States, by months, January, 1913, to June, 1920.

[Average cost for 1913=100.]



Comparison of Retail Food Costs in 51 Cities.

TABLE 4 shows for 39 cities the percentage of increase or decrease in the retail cost of 22 food articles[1] in June, 1920, compared with the average cost in the year 1913, in June, 1919, and in May, 1920. For 11 other cities comparisons are given for the one-year and one-month periods. These cities have been scheduled by the Bureau at different dates since 1913. For Savannah, Ga., the comparison is given only for the month, as this city was first scheduled by the Bureau in 1920. These percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.[2]

Effort has been made by the Bureau each month to have perfect reporting cities; that is, to have every report sent in by the merchants in time to be used in the computation of the city averages. For the month of June every merchant cooperating with the Bureau in the following cities, sent in his report: Baltimore, Boston, Bridgeport, Buffalo, Butte, Chicago, Fall River, Louisville, Manchester, Milwaukee, New York, Portland, Me., Providence, Rochester, Salt Lake City, Scranton, St. Louis, and Washington.

TABLE 4.—PERCENTAGE CHANGES IN THE RETAIL COST OF 22 FOOD ARTICLES IN JUNE, 1920, COMPARED WITH THE COST IN MAY, 1920, JUNE, 1919, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

City.	Percentage increase June, 1920, compared with—			City.	Percentage increase June, 1920, compared with—		
	1913	June, 1919.	May, 1920.		1913	June, 1919.	May, 1920.
Atlanta	112	14	a 2	Milwaukee	129	23	3
Baltimore	118	10	0.4	Minneapolis	130	23	2
Birmingham	125	15	1	Mobile	.....	14	a 2
Boston	114	22	4	Newark	104	16	2
Bridgeport	.....	20	3	New Haven	111	18	1
Buffalo	123	18	3	New Orleans	107	10	a 1
Butte	.....	23	1	New York	114	17	2
Charleston	113	8	a 1	Norfolk	.....	9	a 1
Chicago	126	26	3	Omaha	138	27	5
Cincinnati	119	18	a 1	Peoria	.....	26	3
Cleveland	124	22	2	Philadelphia	111	15	a 0.2
Columbus	.....	18	2	Pittsburgh	115	17	3
Dallas	110	14	a 0.1	Portland, Me	.....	19	3
Denver	115	17	3	Portland, Oreg	109	24	5
Detroit	139	24	5	Providence	118	19	2
Fall River	115	20	2	Richmond	128	13	1
Houston	.....	12	a 5	Rochester	.....	18	1
Indianapolis	128	28	4	St. Louis	137	26	3
Jacksonville	98	9	a 3	St. Paul	.....	24	3
Kansas City, Mo.	131	26	4	Salt Lake City	104	19	1
Little Rock	107	14	a 1	San Francisco	102	20	1
Los Angeles	95	19	1	Savannah	.....	.....	a 0.3
Louisville	118	14	1	Scranton	121	19	4
Manchester	122	23	4	Seattle	110	19	4
Memphis	121	13	1	Springfield, Ill	.....	29	4
				Washington, D. C.	116	11	0.3

a Decrease.

[1] For list of articles see note 2, p. 47.

[2] The consumption figure used for each article in each city is given in the MONTHLY LABOR REVIEW of November, 1918, pp. 94 and 95.

Retail Prices of Coal in the United States.[a]

THE following table shows the average retail prices of coal on July 15, 1919, and on January 15, and June 15, 1920, for the United States and for each of the cities included in the total for the United States. Prices for coal are secured from the cities from which monthly retail prices of food are received.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages made on the several kinds. The coal dealers in each city are asked to quote prices on the kinds of bituminous coal usually sold for household use.

The prices quoted are for coal delivered to consumers but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

RETAIL PRICES PER TON OF 2,000 POUNDS OF COAL, FOR HOUSEHOLD USE, ON JULY 15, 1919, AND ON JANUARY 15 AND JUNE 15, 1920, BY CITIES AND FOR THE UNITED STATES.

City, and kind of coal.	1919	1920	
	July 15.	Jan. 15.	June 15.
United States:			
Pennsylvania anthracite—			
Stove	$12.143	$12.588	$14.064
Chestnut	12.174	12.768	14.134
Bituminous	8.101	8.808	10.188
Atlanta, Ga:			
Bituminous	8.250	9.050	12.545
Baltimore, Md.:			
Pennsylvania anthracite—			
Stove	[1] 11.750	[1] 12.500	[1] 13.500
Chestnut	[1] 11.850	[1] 12.600	[1] 13.600
Bituminous	[1] 6.893	[1] 7.500	[1] 8.786
Birmingham, Ala.:			
Bituminous	7.286	7.496	8.791
Boston, Mass.:			
Pennsylvania anthracite—			
Stove	12.000	12.750	14.500
Chestnut	12.000	12.750	14.500
Bituminous	9.000	9.500	13.500
Bridgeport, Conn.:			
Pennsylvania anthracite—			
Stove	11.750	12.500	15.000
Chestnut	11.750	12.500	15.000
Bituminous	8.000	8.500	12.000
Buffalo, N. Y.:			
Pennsylvania anthracite—			
Stove	10.700	10.890	12.000
Chestnut	10.800	10.990	12.000
Bituminous	8.000	.....	11.000
Butte, Mont.:			
Bituminous	9.836	10.381	10.444
Charleston, S. C.:			
Pennsylvania anthracite—			
Stove	[1] 13.400	[1] 13.400	[1] 16.200
Chestnut	[1] 13.500	[1] 13.500	[1] 16.300
Bituminous	8.500	8.500	12.000
Chicago, Ill.:			
Pennsylvania anthracite—			
Stove	$12.200	$12.590	$14.150
Chestnut	12.300	12.690	14.288
Bituminous	7.017	8.020	8.414
Cincinnati, Ohio:			
Pennsylvania anthracite—			
Stove	12.000	12.500	.....
Chestnut	12.000	12.667	14.000
Bituminous	6.139	6.739	8.000
Cleveland, Ohio:			
Pennsylvania anthracite—			
Stove	11.538	12.300	13.525
Chestnut	11.650	12.233	13.500
Bituminous	7.710	7.911	9.200
Columbus, Ohio:			
Pennsylvania anthracite—			
Chestnut	12.000	12.000	14.650
Bituminous	6.056	6.513	9.982
Dallas, Tex.:			
Arkansas anthracite—			
Egg	14.500	18.500	17.000
Bituminous	11.083	14.583	14.000
Denver, Colo.:			
Colorado anthracite—			
Stove, 3 and 5 mixed	13.150	14.000	14.600
Furnace, 1 and 2 mixed	12.650	13.500	14.530
Bituminous	8.348	8.908	9.371
Detroit, Mich.:			
Pennsylvania anthracite—			
Stove	11.890	12.650	14.250
Chestnut	11.980	12.750	14.200
Bituminous	7.988	8.781	10.933

[1] Per ton of 2,240 pounds.

[a] Prices of coal have formerly been secured semiannually and published in the March and September issues of the MONTHLY LABOR REVIEW. The Bureau now hopes to be able to secure these prices monthly.

RETAIL PRICES PER TON OF 2,000 POUNDS OF COAL, FOR HOUSEHOLD USE, ON JULY 15, 1919, AND ON JANUARY 15 AND JUNE 15, 1920, BY CITIES AND FOR THE UNITED STATES—Continued.

City, and kind of coal.	1919	1920	
	July 15.	Jan. 15.	June 15.
Fall River, Mass.:			
Pennsylvania anthracite—			
Stove	$12.500	$13.000	$14.500
Chestnut	12.250	12.750	14.250
Bituminous	9.500	10.000	12.250
Houston, Tex.:			
Bituminous	10.000	12.000	11.500
Indianapolis, Ind.:			
Pennsylvania anthracite—			
Stove	12.250	13.000	13.750
Chestnut	12.250	13.167	14.250
Bituminous	7.375	8.188	9.313
Jacksonville, Fla.:			
Pennsylvania anthracite—			
Stove	15.000	17.000	.....
Chestnut	15.000	17.000	.....
Bituminous	10.000	11.000	14.000
Kansas City, Mo.:			
Pennsylvania anthracite—			
Stove	16.210	17.400	.....
Chestnut	16.470	17.625	.....
Arkansas anthracite—			
Furnace	13.593	15.950	15.150
Stove or No. 4	14.450	16.583	15.750
Bituminous	7.469	8.625	9.118
Little Rock, Ark.:			
Arkansas anthracite—			
Egg	12.500	.....	.....
Stove	13.250	.....	.....
Bituminous	9.250	10.375	11.950
Los Angeles, Calif.:			
Bituminous	14.583	16.000	17.000
Louisville, Ky.:			
Pennsylvania anthracite—			
Stove	12.750	13.750	.....
Chestnut	12.750	13.750	15.000
Bituminous	6.816	6.836	9.813
Manchester, N. H.:			
Pennsylvania anthracite—			
Stove	12.750	13.417	15.000
Chestnut	12.750	13.417	15.000
Bituminous	10.000	10.000	12.000
Memphis, Tenn.:			
Pennsylvania anthracite—			
Stove	16.000	16.000	17.000
Chestnut	16.000	16.000	17.000
Bituminous	7.528	8.000	8.850
Milwaukee, Wis.:			
Pennsylvania anthracite—			
Stove	12.400	12.600	14.688
Chestnut	12.500	12.700	14.788
Bituminous	8.144	8.960	11.469
Minneapolis, Minn.:			
Pennsylvania anthracite—			
Stove	13.800	14.000	16.440
Chestnut	13.900	14.100	16.480
Bituminous	9.189	10.425	11.918
Mobile, Ala.:			
Pennsylvania anthracite—			
Stove	17.000	17.000	.....
Chestnut	17.000	17.000	.....
Bituminous	9.722	10.333	11.400
Newark, N. J.:			
Pennsylvania anthracite—			
Stove	$10.050	$10.483	$11.750
Chestnut	10.050	10.483	11.750
New Haven, Conn.:			
Pennsylvania anthracite—			
Stove	11.333	12.250	14.250
Chestnut	11.333	12.250	14.250
New Orleans, La.:			
Pennsylvania anthracite—			
Stove	16.000	17.500	.....
Chestnut	16.000	17.500	18.500
Bituminous	8.292	9.269	10.333
New York, N. Y.:			
Pennsylvania anthracite—			
Stove	10.800	11.536	12.800
Chestnut	10.857	11.600	12.814
Norfolk, Va.:			
Pennsylvania anthracite—			
Stove	12.500	13.000	14.500
Chestnut	12.500	13.000	14.500
Bituminous	9.375	9.750	11.727
Omaha, Nebr.:			
Pennsylvania anthracite—			
Stove	16.450	17.275	19.940
Chestnut	16.550	17.450	20.080
Bituminous	8.930	10.108	11.168
Peoria, Ill.:			
Pennsylvania anthracite—			
Stove	11.667	13.000	.....
Chestnut	11.750	13.000	.....
Bituminous	5.550	6.000	6.375
Philadelphia, Pa.:			
Pennsylvania anthracite—			
Stove	[1]10.850	[1]11.881	[1] 13.286
Chestnut	[1]10.950	[1]11.906	[1] 13.250
Pittsburgh, Pa.:			
Pennsylvania anthracite—			
Stove	[1]12.750	[1]13.750	[1] 15.250
Chestnut	[1]12.663	[1]14.000	[1] 15.125
Bituminous	5.833	6.179	7.333
Portland, Me.:			
Pennsylvania anthracite—			
Stove	12.200	13.440	15.360
Chestnut	12.200	13.440	15.360
Bituminous	8.573	9.370	12.650
Portland, Oreg.:			
Bituminous	11.493	11.618	11.800
Providence, R. I.:			
Pennsylvania anthracite—			
Stove	[2]12.000	[2]12.950	14.500
Chestnut	[2]12.000	[2]13.000	14.500
Bituminous	[2]9.000	[2]10.000	13.167
Richmond, Va.:			
Pennsylvania anthracite—			
Stove	12.000	12.125	13.500
Chestnut	12.000	12.125	13.500
Bituminous	8.464	8.931	10.286

[1] Per ton of 2,240 pounds.

[2] Fifty cents per ton additional is charged for "binning." Most customers require binning or basketing the coal into the cellar.

RETAIL PRICES PER TON OF 2,000 POUNDS OF COAL, FOR HOUSEHOLD USE, ON JULY 15, 1919, AND ON JANUARY 15 AND JUNE 15, 1920, BY CITIES AND FOR THE UNITED STATES—Concluded.

City, and kind of coal.	1919	1920		City, and kind of coal.	1919	1920	
	July 15.	Jan. 15.	June 15.		July 15.	Jan. 15.	June 15.
Rochester, N. Y.:				San Francisco, Calif.—Concluded.			
Pennsylvania anthracite—				Colorado anthracite—			
Stove	$10.600	$10.800	$12.100	Egg	$19.400	$21.750	$21.750
Chestnut	10.700	10.900	12.200	Bituminous	13.591	15.100	15.645
St. Louis, Mo.:				Savannah, Ga.:			
Pennsylvania anthracite—				Pennsylvania anthracite—			
Stove	12.900	13.100	14.433	Stove	.....	15.100	16.067
Chestnut	12.900	13.225	14.433	Chestnut	.....	15.100	16.067
Bituminous	5.425	5.970	6.650	Bituminous	.....	11.100	13.233
St. Paul, Minn.:				Scranton, Pa.:			
Pennsylvania anthracite—				Pennsylvania anthracite—			
Stove	13.800	14.000	16.380	Stove	7.683	8.233	9.100
Chestnut	13.900	14.100	16.420	Chestnut	7.783	8.300	9.100
Bituminous	9.875	11.531	13.277	Seattle, Wash.:			
Salt Lake City, Utah:				Bituminous	[2] 9.103	[2] 9.588	9.463
Colorado anthracite:				Springfield, Ill.:			
Furnace, 1 and 2 mixed	16.000	16.313	17.833	Bituminous	3.976	3.950	4.420
Stove, 3 and 5 mixed	16.000	16.583	18.167	Washington, D. C.:			
Bituminous	7.250	8.236	9.256	Pennsylvania anthracite—			
San Francisco, Calif.:				Stove	[1] 11.911	[1] 12.447	[1] 13.650
New Mexico anthracite—				Chestnut	[1] 12.011	[1] 12.538	[1] 13.729
Cerillos egg	20.500	23.000	23.000	Bituminous	[1] 8.050	[1] 8.267	[1] 9.840

[1] Per ton of 2,240 pounds.
[2] Prices in Zone A. The cartage charge in Zone A is $1.85, which has been included in the average. The cartage charges in Seattle range from $1.85, to $2.90, according to distance

Index Numbers of Wholesale Prices in the United States.

A SLIGHT decline in the general level of wholesale prices in June is shown by information collected in representative markets by the Bureau of Labor Statistics. Measured by changes in the Bureau's weighted index number, in which each commodity has an influence commensurate with its importance in the country's markets, the decrease was a little over 1 per cent.

Food and clothing furnished the most notable examples of price decline. In the food group the decrease was $2\frac{3}{4}$ per cent, while the group of cloths and clothing showed nearly $3\frac{1}{2}$ per cent decrease. Smaller decreases were recorded for farm products, metals, and lumber and building materials.

Fuel and lighting materials continued steeply upward, with an average increase of 4.68 per cent. The group of house-furnishing goods showed the largest increase of all, with an advance of $6\frac{3}{4}$ per cent over the May price level. Chemicals and drugs also increased appreciably in price, as did the group of miscellaneous commodities including such important articles as cottonseed meal, lubricating oil, phosphate rock, and wood pulp.

Some of the more important price changes from May to June, as measured by average prices in each month, are shown in the statement which follows:

IMPORTANT ARTICLES INCREASING OR DECREASING IN AVERAGE PRICE IN JUNE, AS COMPARED WITH MAY, 1920, BY GROUPS OF COMMODITIES.

Increases.

Commodity.	Per cent.
Farm products.	
Oats, Chicago	1.7
Rye, Chicago	1.6
Cattle, Chicago	20.1
Hogs, Chicago	4.7
Food, etc.	
Beans, New York	5.2
Cheese, San Francisco	14.6
Bananas, New York	24.8
Lemons, Chicago	21.2
Prunes, New York	12.4
Raisins, New York	12.2
Corn meal:	
Terre Haute	3.7
Philadelphia	6.3
Beef, fresh:	
Good native steers, Chicago	14.1
Native sides, New York	14.6
Milk, New York	9.8
Cloths and clothing.	
Silk, New York	2.6
Flannel, woolen, Boston	7.4
Fuel and lighting.	
Coal, bituminous:	
Chicago	11.7
Cincinnati	8.2
Pittsburgh	3.3
St. Louis	10.2
Coke, Pittsburgh	19.2
Gasoline	2.0
Metals and metal products.	
Pig iron:	
Basic, valley	1.7
Bessemer, Pittsburgh	1.8
Foundry No. 2, northern, Pittsburgh	1.6
Lumber and building materials.	
Brick, Cincinnati	12.5
Cement, New York	5.8
Lime, New York	3.1
Poplar, New York	3.0
Chemicals and drugs.	
Alcohol, wood, New York	17.0
Alum, lump, New York	9.7
Glycerine, refined, c. p., New York	8.1
Soda, carbonate of (sal soda) New York	7.8
House-furnishing goods.	
Bedroom sets, Chicago	10.2
Bedroom chairs, Chicago	11.5
Kitchen tables, Chicago	2.9
Miscellaneous.	
Cottonseed meal, New York	1.4
Lubricating oil, New York	8.7
Phosphate rock, Tampa, Fla	23.0
Wood pulp, New York	13.1

Decreases.

Commodity.	Per cent.
Farm products.	
Cotton, New York	4.9
Flaxseed, Minneapolis	14.7
Barley, Chicago	12.9
Corn, Chicago	7.2
Wheat:	
Chicago	4.9
Kansas City	4.2
Minneapolis	5.7
Hay:	
Alfalfa, Kansas City	9.9
Timothy, Chicago	8.8
Calfskins, Chicago	32.2
Goatskins, New York	28.2
Packers' hides, Chicago	3.6
Sheep, Chicago	32.2
Peanuts, Norfolk	7.6
Tobacco, Louisville	3.0
Food, etc.	
Butter:	
Boston	6.7
Chicago	4.9
Cincinnati	6.4
New Orleans	6.8
New York	7.4
Philadelphia	8.9
St. Louis	6.5
Cheese:	
Chicago	9.8
New York	6.4
Food, etc.—Con.	
Eggs:	
Boston	4.8
Chicago	5.5
New Orleans	3.3
New York	2.5
San Francisco	2.9
Flour, wheat:	
Patent, Kansas City	4.4
Standard patent, Minneapolis	5.8
Bakers' patent, Minneapolis	5.0
Oranges, Chicago	11.9
Lamb, Chicago	4.6
Mutton, New York	11.8
Poultry:	
New York	3.3
Chicago	8.1
Veal, New York	6.7
Oleo oil, Chicago	6.5
Sugar, 96° centrifugal, New York	6.1
Onions, Chicago	60.6
Potatoes, Chicago	10.2
Cloths and clothing.	
Shoes, factory	5.3
Print cloths, Boston	3.6
Sheeting, brown, Boston	6.3
Cotton yarns, Boston	6.3
Wool, Boston	17.2
Woolen yarns, Philadelphia	4.9
Metals and metal products.	
Silver, bar, fine, New York	12.7
Tin, pig, New York	11.9
Zinc, spelter (pig zinc) New York	2.0
Lumber and building materials.	
Lath, New York	5.9
Douglas fir:	
No. 1, mills, Washington State	21.3
No. 2, mills, Washington State	22.7
Turpentine, New York	24.5
Shingles, red cedar, mills	16.0
Chemicals and drugs.	
Caustic soda, New York	3.5
Soda ash, light, New York	6.3
Sulphur (brimstone), New York	7.1
Miscellaneous.	
Bran, Minneapolis	3.1
Cottonseed oil, New York	13.2
Manila hemp, New York	9.4
Mill-feed middlings, Minneapolis	2.8

As shown by changes in the index numbers for the 12 months from June, 1919, to June, 1920, farm products increased 5.2 per cent, food 36.8 per cent, and cloths and clothing 29.8 per cent. During the same time fuel and lighting increased 44.7 per cent, metals and metal products 23.4 per cent, and lumber and building materials

92.6 per cent. Chemicals and drugs increased 25.3 per cent, house-furnishing goods 55.4 per cent, and miscellaneous commodities 16.5 per cent in average price. All commodities, considered in the aggregate, increased nearly 30 per cent in price.

INDEX NUMBERS OF WHOLESALE PRICES IN SPECIFIED YEARS AND MONTHS, 1913 TO JUNE, 1920, BY GROUPS OF COMMODITIES.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House furnishing goods.	Miscellaneous.	All commodities.
1913	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
January	97	99	100	103	107	100	101	100	100	100
April	97	96	100	98	102	101	101	100	98	98
July	101	102	100	99	98	101	99	100	101	100
October	103	102	100	100	99	98	100	100	100	101
1914	103	103	98	96	87	97	101	99	99	100
January	101	102	98	99	92	98	100	99	99	100
April	103	95	99	98	91	99	100	99	101	98
July	104	104	99	95	85	97	99	99	97	100
October	103	107	97	93	83	96	105	99	96	99
1915	105	104	100	93	97	94	114	99	99	101
January	102	106	96	93	83	94	103	99	100	99
April	107	105	99	89	91	94	102	99	99	100
July	108	104	99	90	102	93	108	99	98	101
October	105	103	103	96	100	93	124	99	99	101
1916	122	126	128	119	148	101	159	115	120	124
January	108	113	110	105	126	99	150	105	107	110
April	114	117	119	108	147	101	172	108	110	117
July	118	121	126	108	145	99	156	121	120	119
October	136	140	138	133	151	101	150	124	132	134
1917	189	176	181	175	208	124	198	144	155	176
January	148	150	161	176	183	106	159	132	138	151
April	181	182	169	184	208	114	170	139	149	172
July	199	181	187	192	257	132	198	152	153	186
October	208	183	193	146	182	134	252	152	163	181
1918	220	189	239	163	181	151	221	196	193	196
January	207	187	211	157	174	136	232	161	178	185
February	208	186	216	157	176	138	232	161	181	186
March	212	177	223	158	176	144	232	165	184	187
April	217	178	232	157	177	146	229	172	191	190
May	214	177	237	160	178	148	223	173	194	190
June	217	179	245	159	178	150	219	198	196	193
July	224	184	249	166	184	154	216	199	190	198
August	230	191	252	166	185	157	222	221	191	202
September	237	199	255	167	184	159	220	226	194	207
October	224	201	257	167	187	158	218	226	196	204
November	221	206	256	171	188	164	215	226	203	206
December	222	210	250	171	184	164	195	227	204	206
1919	234	210	261	173	161	192	179	236	217	212
January	222	207	234	170	172	161	191	218	212	203
February	218	196	223	169	168	163	185	218	208	197
March	228	203	216	168	162	165	183	218	217	201
April	235	211	217	167	152	162	178	217	216	203
May	240	214	228	167	152	164	179	217	213	207
June	231	204	258	170	154	175	174	233	212	207
July	246	216	282	171	158	186	171	245	221	218
August	243	227	304	175	165	208	172	259	225	226
September	226	211	306	181	160	227	173	262	217	220
October	230	211	313	181	161	231	174	264	220	223
November	240	219	325	179	164	236	176	299	220	230
December	244	234	335	181	169	253	179	303	220	238
1920:										
January	246	253	350	184	177	268	189	324	227	248
February	237	244	356	187	189	300	197	329	227	249
March	239	246	356	192	192	324	205	329	230	253
April	246	270	353	213	195	341	212	331	238	265
May	244	287	347	235	193	341	215	339	246	272
June [1]	243	279	335	246	190	337	218	362	247	269

[1] Preliminary.

Changes in Wholesale Prices in the United States.

A REVIEW of wholesale price movements in representative markets of the United States during the second quarter of 1920 shows that a number of important commodities averaged lower than in the first quarter. Among the articles showing a decrease were cattle, fresh beef, hogs, lard, salt pork, sheep, butter, eggs, milk, rice, wool, worsted yarn, hides, leather, pig tin, pig lead, and spelter.

On the other hand, many articles, as hams, mutton, wheat and wheat flour, corn and corn meal, oats, rye and rye flour, barley, potatoes, sugar, cotton and cotton yarn, anthracite and bituminous coal, coke, pig iron, steel billets, crude and refined petroleum and gasoline, increased in price during the quarter. Mess beef, bacon, cotton and woolen goods, shoes, electrolytic copper, copper wire, and tin plate showed practically no change in price.

Comparing prices in June with those of a year ago, the Bureau's records show that milk, cattle, hams, eggs, and sheep each decreased about 10 per cent, wool 15 per cent, hides 16 per cent, and mess pork 28 per cent. A decrease of 29 per cent is shown for hogs, 36 per cent for bacon, 40 per cent for lard, 43 per cent for pig tin, and 52 per cent for mess beef, respectively.

In the same period, mutton, corn, butter, electrolytic copper, fresh beef, corn meal, and copper wire showed increases ranging from 4 to 17 per cent. Wheat and wheat flour and spelter each increased 18 per cent, cotton 20 per cent, gasoline 22 per cent, worsted yarns and storm serge 25 per cent, and shoes and barley about 28 per cent. Pig iron and crude petroleum increased 53 per cent, steel billets 56 per cent, pig lead 60 per cent, oats 61 per cent, rice 73 per cent, and sugar, coke, and potatoes 141 per cent, 258 per cent, and 329 per cent, respectively, from June, 1919, to June, 1920.

WHOLESALE PRICES IN CERTAIN MONTHS, 1914 TO 1920, AS COMPARED WITH AVERAGE PRICES IN 1913.[1]

Average money prices.

Article.	Unit.	1913	July—					1919				1920					
			1914	1915	1916	1917	1918	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.	Apr.	May.	June.
FOODSTUFFS.																	
(a) *Animal.*																	
Cattle, good to choice steers	100 lbs.	$8.507	$9.219	$9.213	$9.985	$12.500	$17.625	$18.413	$18.325	$16.869	$17.594	$15.938	$14.969	$14.400	$13.906	$12.600	$15.031
Beef, fresh, good native steers	Lb.	.130	.135	.132	.141	.164	.240	.245	.245	.208	.229	.232	.213	.205	.209	.195	.223
Beef, salt, extra mess	Bbl.	18.923	17.250	17.500	18.250	30.500	34.875	35.500	35.500	34.300	23.250	18.625	17.000	17.000	17.000	17.000	17.000
Hogs, heavy	100 lbs.	8.365	8.769	7.281	9.825	15.460	17.720	17.538	20.500	22.225	14.656	15.094	14.513	14.435	14.806	13.975	14.725
Bacon, short, clear sides	Lb.	.127	.141	.111	.157	.248	.276	.289	.326	.337	.227	.221	.220	.211	.219	.218	.212
Hams, smoked, loose	Lb.	.166	.177	.161	.190	.240	.303	.349	.360	.384	.290	.294	.306	.316	.331	.356	.365
Lard, prime, contract	Lb.	.110	.102	.081	.131	.201	.264	.238	.313	.351	.280	.241	.210	.210	.200	.208	.206
Pork, salt, mess	Bbl.	22.471	23.625	18.500	27.167	42.250	48.500	50.375	55.000	58.900	44.125	44.875	43.438	42.300	42.813	42.250	40.400
Sheep, ewes	100 lbs.	4.687	4.538	5.469	6.545	8.600	10.975	9.556	13.500	8.125	7.156	10.875	13.063	13.525	14.250	12.525	7.344
Mutton, dressed	Lb.	.103	.095	.109	.131	.145	.205	.176	.229	.159	.126	.158	.206	.196	.251	.195	.172
Butter, creamery, extra	Lb.	.310	.270	.261	.276	.376	.432	.618	.615	.512	.646	.631	.622	.663	.639	.571	.549
Eggs, fresh, firsts	Doz.	.226	.187	.169	.223	.318	.374	.579	.403	.406	.569	.652	.515	.450	.413	.411	.388
Milk	Qt.	.035	.030	.030	.031	.050	.054	.091	.066	.071	.073	.085	.081	.079	.061	.061	.067
(b) *Vegetable.*																	
Wheat, No. 1, northern	Bu.	.874	.897	1.390	1.170	2.582	2.170	2.223	2.589	2.680	2.625	2.931	2.688	2.755	3.006	3.075	2.900
Wheat flour, standard patent	Bbl.	4.584	4.594	7.031	6.100	12.750	[2] 10.702	12.275	12.215	12.155	12.031	14.444	13.538	13.165	14.281	15.031	14.160
Corn, No. 2, mixed	Bu.	.625	.710	.783	.808	2.044	1.665	1.401	1.609	1.920	1.400	1.503	1.450	1.579	1.706	1.995	1.851
Corn meal	100 lbs.	1.599	1.780	1.750	1.982	4.880	4.825	3.150	3.525	4.488	2.950	3.080	3.013	3.450	3.775	4.220	4.375
Oats, standard, in store	Bu.	.376	.369	.529	.405	.764	.765	.653	.681	.764	.706	.836	.833	.901	1.003	1.095	1.114
Rye, No. 2	Bu.	.636	.618	1.036	.966	2.226	1.705	1.613	1.741	1.555	1.388	1.766	1.568	1.744	2.007	2.174	2.208
Rye flour	Bbl.	3.468	3.075	5.533	5.035	11.417	10.500	8.738	10.060	8.050	7.413	9.538	8.513	9.510	11.138	11.869	12.010
Barley, fair to good malting	Bu.	.625	.533	.743	.746	1.391	1.125	.956	1.133	1.268	1.299	1.494	1.390	1.518	1.656	1.725	1.520
Rice, Honduras, head	Lb.	.051	.054	.049	.045	.070	.094	.091	.087	.133	.121	.127	.128	.125	.123	.122	.123
Potatoes, white	Bu.	.614	1.206	.444	.863	2.375	1.035	1.084	1.152	1.683	1.350	2.621	2.678	3.291	4.249	4.425	3.975
Sugar, granulated	Lb.	.043	.042	.058	.075	.075	.074	.088	.088	.088	.088	.154	.150	.137	.192	.225	.212
TEXTILES AND LEATHER GOODS.																	
Cotton, upland, middling	Lb.	.128	.131	.092	.130	.261	.312	.296	.290	.351	.355	.393	.388	.414	.424	.414	.393
Cotton yarn, carded, 10/1	Lb.	.221	.215	.160	.253	.450	.641	.445	.417	.591	.611	.727	.747	.755	.778	.767	.730
Sheeting, brown, Pepperell	Yd.	.073	.070	.060	.078	.140	[3]	.191	.150	.219	.229	.285	[3]	[3]	[3]	[3]	[3]
Bleached muslin, Lonsdale	Yd.	.082	.085	.075	.088	.160	.250	.209	.176	.274	.294	.323	.333	.333	.333	.333	.333
Wool, 1/4 and 3/8 grades, scoured	Lb.	.471	.444	.557	.686	1.200	1.437	1.200	1.091	1.236	1.236	1.236	1.236	1.236	1.200	1.164	1.000

Worsted yarn, 2/32's	Lb.	.777	.650	.850	1.100	2.600	2.150	1.750	1.500	1.600	1.750	2.250	2.250	2.200	2.200	2.000	2.000
Clay worsted suitings, 16-oz	Yd.	1.382	1.328	1.508	2.000	3.250	4.450	[3]	[3]	[3]	[3]	[3]	5.423	5.423	5.423	5.423	5.423
Storm serge, all-wool, 50-in	Yd.	.563	.505	.539	.760	1.176	1.470	1.642	1.054	1.223	1.374	1.421	1.421	1.421	1.421	1.421	1.421
Hides, packers' heavy native steers	Lb.	.184	.194	.258	.270	.330	.324	.280	.295	.486	.482	.400	.403	.364	.361	.354	.341
Leather, chrome calf	Sq. ft.	.270	.275	.280	.460	.540	.640	.660	.680	1.100	1.250	1.275	1.275	1.275	1.250	1.175	1.075
Leather, sole, oak	Lb.	.449	.475	.495	.635	.815	.830	.785	.825	.950	1.025	.915	.915	.915	.915	.910	.900
Shoes, men's, Goodyear welt, vici calf, blucher	Pair	3.113	3.150	3.250	3.750	4.750	5.645	6.500	6.500	7.476	9.000	9.282	9.500	9.600	9.600	9.600	9.100
Shoes, women's Goodyear welt, kid, 8-in. lace[4]	Pair	2.175	2.260	2.350	2.750	3.500	5.000	5.350	5.350	7.250	8.000	8.000	8.250	8.250	8.250	8.250	7.750
MINERAL AND METAL PRODUCTS.																	
Coal, anthracite, chestnut	2,240 lbs.	5.313	5.241	5.200	5.507	5.933	6.693	8.050	8.017	8.304	8.507	8.518	8.513	8.514	8.523	9.039	9.462
Coal, bituminous, run of mine	2,000 lbs.	2.200	2.200	2.200	2.200	5.000	4.100	4.100	4.000	4.000	4.500	4.100	4.100	4.100	5.500	6.000	6.000
Coke, furnace, prompt shipment	2,000 lbs.	2.538	2.000	2.750	2.750	15.000	6.000	5.781	3.900	4.095	4.825	6.000	6.000	6.000	10.500	12.000	14.300
Copper, electrolytic	Lb.	.157	.134	.199	.265	.318	.255	.204	.153	.215	.217	.193	.191	.186	.192	.191	.190
Copper wire, bare, No. 8	Lb.	.167	.148	.210	.325	.328	.285	.228	.175	.244	.264	.228	.230	.230	.230	.230	.230
Pig iron: Bessemer	2,240 lbs.	17.133	14.900	14.950	21.950	57.450	36.600	33.600	29.350	39.350	29.350	40.400	42.900	43.400	43.650	44.025	44,800
Steel billets	2,240 lbs.	25.789	19.000	21.380	41.000	100.000	47.500	43.500	38.500	38.500	38.500	48.000	55.250	60.000	60.000	60.000	60.000
Tin plate, domestic, coke	100 lbs.	3.558	3.350	3.175	5.875	12.000	7.750	7.350	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000
Pig tin	Lb.	.449	.311	.391	.389	.620	.932	.715	.725	.702	.560	.637	.603	.621	.623	.557	.410
Pig lead	Lb.	.044	.039	.058	.069	.114	.080	.056	.051	.056	.064	.087	.088	.092	.090	.086	.085
Spelter	Lb.	.058	.051	.220	.113	.093	.087	.074	.065	.079	.079	.097	.092	.089	.086	.081	.080
Petroleum, crude	Bbl.	2.450	1.750	1.350	2.600	3.100	4.000	4.000	4.000	4.000	4.250	5.063	5.513	6.100	6.100	6.100	6.100
Petroleum, refined, water-white	Gal.	.123	.120	.120	.120	.120	.171	.175	.185	.205	.220	.224	.240	.250	.260	.260	.260
Gasoline, motor	Gal.	.168	.140	.120	.240	.240	.241	.245	.245	.245	.245	.257	.265	.280	.285	.294	.300

[1] This table is published quarterly in the February, May, August, and November issues of the MONTHLY LABOR REVIEW.
[2] Standard war flour.
[3] No quotation.
[4] Prior to January, 1918, prices are for gun metal ,button.

WHOLESALE PRICES IN CERTAIN MONTHS, 1914 TO 1920, AS COMPARED WITH AVERAGE PRICES IN 1913—Concluded.

Relative prices.

Article.	1913	July—					1919				1920					
		1914	1915	1916	1917	1918	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.	Apr.	May.	June.
FOODSTUFFS.																
(a) Animal.																
Cattle, good to choice steers	100	108.4	108.3	117.4	147.6	207.2	216.4	215.4	198.3	206.8	187.4	176.0	169.3	163.5	148.1	176.7
Beef, fresh, good native steers	100	103.8	101.5	108.5	126.2	184.6	188.5	188.5	160.0	176.2	178.5	163.8	157.7	160.8	150.0	171.5
Beef, salt, extra mess	100	91.2	92.5	96.4	161.2	184.3	187.6	187.6	181.3	122.9	98.4	89.8	89.8	89.8	89.8	89.8
Hogs, heavy	100	104.8	87.0	117.5	184.8	211.8	209.7	245.1	265.4	175.2	180.4	173.5	172.6	177.0	167.1	176.0
Bacon, short, clear sides	100	111.0	87.4	123.6	195.3	217.3	227.6	256.7	265.4	178.7	174.0	173.2	166.1	172.4	171.7	166.9
Hams, smoked, loose	100	106.6	97.0	114.5	144.0	182.5	210.2	216.9	231.3	174.7	177.1	184.3	190.4	199.4	214.5	219.9
Lard, prime, contract	100	92.7	73.6	119.1	182.7	240.0	216.4	284.5	319.1	254.5	219.1	190.9	190.9	181.8	189.1	187.3
Pork, salt, mess	100	105.1	82.3	120.9	188.0	215.8	224.2	244.8	262.1	196.4	199.7	193.3	188.2	190.5	188.0	179.8
Sheep, ewes	100	96.8	116.7	139.6	183.5	234.2	203.9	288.0	173.4	152.7	232.0	278.7	288.6	304.0	267.2	156.7
Mutton, dressed	100	92.2	105.8	127.2	140.8	199.0	170.9	222.3	154.4	122.3	153.4	200.0	190.3	243.7	189.3	167.0
Butter, creamery, extra	100	87.1	84.2	89.0	121.3	139.4	199.4	198.4	165.2	208.4	203.5	200.6	213.9	206.1	184.2	177.1
Eggs, fresh, firsts	100	82.7	74.8	98.7	140.7	165.5	256.2	178.3	184.1	251.8	288.5	227.9	199.1	182.7	181.9	171.7
Milk	100	85.7	85.7	88.6	142.9	154.3	260.0	188.6	202.9	208.6	242.9	231.4	225.7	174.3	174.3	191.4
(b) Vegetable.																
Wheat, No. 1, northern	100	102.6	159.0	133.9	295.4	248.3	254.3	296.2	306.6	300.4	335.4	307.6	315.2	343.9	351.8	331.8
Wheat flour, standard patent	100	100.2	153.4	133.1	278.1	[1] 233.5	224.1	266.5	265.2	262.5	315.1	295.3	287.2	311.5	327.9	308.9
Corn, No. 2, mixed	100	113.6	125.3	120.3	327.0	266.4	224.2	257.4	307.2	224.0	240.5	232.0	252.6	273.0	319.2	296.2
Corn meal	100	111.3	109.4	124.0	305.2	301.8	197.0	220.4	280.7	184.5	192.6	188.4	215.8	236.1	263.9	273.6
Oats, standard, in store	100	98.1	140.7	107.7	203.2	203.5	173.7	181.1	203.2	187.8	222.3	221.5	239.6	266.8	291.2	296.3
Rye, No. 2	100	97.2	162.9	151.9	350.0	268.1	253.6	273.7	244.5	218.2	277.7	246.5	274.2	315.6	341.8	347.2
Rye flour	100	88.7	159.5	145.2	329.2	302.8	252.0	290.1	232.1	213.8	275.0	245.5	274.2	321.2	342.2	346.3
Barley, fair to good malting	100	85.3	118.9	119.4	222.6	180.0	153.0	181.3	202.9	207.8	239.0	222.4	242.9	265.0	276.0	243.2
Rice, Honduras, head	100	105.9	96.1	88.2	137.3	154.3	178.4	170.6	260.8	237.4	249.0	251.0	245.1	241.2	239.2	241.2
Potatoes, white	100	196.4	72.3	140.6	386.6	168.6	176.5	187.6	274.1	219.9	426.9	436.2	536.0	692.0	720.7	647.4
Sugar, granulated	100	97.7	134.9	174.4	174.4	172.1	204.7	204.7	204.7	204.7	358.1	348.8	318.6	446.5	523.3	493.0
TEXTILES AND LEATHER GOODS.																
Cotton, upland, middling	100	102.3	71.9	101.6	203.9	243.8	231.3	226.6	274.2	277.3	307.0	303.1	323.4	331.3	323.4	307.0
Cotton yarn, carded, 10/1	100	97.3	72.4	114.5	203.6	289.6	201.4	188.7	267.4	276.5	329.0	338.0	341.6	352.0	347.1	330.3
Sheeting, brown, Pepperell	100	95.9	82.2	106.8	191.8	(2)	261.6	205.5	300.0	313.7	390.4	(2)	(2)	(2)	(2)	(2)
Bleached muslin, Lonsdale	100	103.7	91.5	107.3	195.1	304.9	254.9	214.6	334.1	358.5	393.9	406.1	406.1	406.1	406.1	406.1
Wool, 1/4 to 3/8 grades, scoured	100	94.3	118.3	145.6	254.8	305.1	254.8	231.6	262.4	262.4	262.4	262.4	262.4	254.8	247.1	212.3
Worsted yarn, 2/32s	100	83.7	109.4	141.6	205.9	276.7	225.2	193.1	205.9	225.2	289.6	289.6	283.1	283.1	257.4	257.4

Clay worsted suitings, 16-ounce	100	96.1	109.1	144.7	235.2	322.0	(2)	(2)	(2)	(2)	(2)	392.4	392.4	392.4	392.4	392.4
Storm serge, all wool, 50-inch	100	89.7	95.7	135.0	208.9	261.1	291.7	187.2	217.2	244.0	252.4	252.4	252.4	252.4	252.4	252.4
Hides, packers' heavy native steers	100	105.4	140.2	146.7	179.3	176.1	152.2	160.3	264.1	262.0	217.4	219.0	197.8	196.2	192.4	185.3
Leather, chrome calf	100	101.9	103.7	170.4	200.0	237.0	244.4	251.9	407.4	463.0	472.2	472.2	472.2	463.0	435.2	398.1
Leather, sole, oak	100	105.8	110.2	141.4	181.5	184.9	174.8	183.7	211.6	228.3	203.8	203.8	203.8	203.8	202.7	200.4
Shoes, men's, Goodyear welt, vici calf, blucher	100	101.2	104.4	120.5	152.6	181.3	208.8	208.8	240.2	289.1	298.2	305.2	308.4	308.4	308.4	292.3
Shoes, women's, Goodyear welt, kid, 8-inch lace[3]	100	103.9	108.1	126.4	160.9	189.2	202.6	202.6	274.5	302.8	302.8	312.3	312.3	312.3	312.3	293.4
MINERAL AND METAL PRODUCTS.																
Coal, anthracite, chestnut	100	98.6	97.9	103.7	111.7	126.0	151.5	150.9	156.3	160.1	160.3	160.2	160.3	160.4	170.5	171.8
Coal, bituminous, run of mine	100	100.0	100.0	100.0	227.3	186.4	186.4	181.8	181.8	204.5	186.4	186.4	186.4	250.0	272.7	272.7
Coke, furnace, prompt shipment	100	78.8	69.0	108.4	591.0	236.4	227.8	153.7	161.3	190.1	236.4	236.4	236.4	413.7	472.8	563.4
Copper, electrolytic	100	85.4	126.8	168.8	202.5	162.4	129.9	97.5	136.9	138.2	122.9	121.7	118.5	122.3	121.7	121.0
Copper wire, bare, No. 8	100	88.6	125.7	195.6	202.4	170.7	136.5	104.8	146.1	158.1	136.5	137.7	137.7	137.7	137.7	137.7
Pig iron, Bessemer	100	87.0	87.3	128.1	335.3	213.6	196.1	171.3	171.3	171.3	235.8	250.4	253.3	254.8	257.0	261.5
Steel billets	100	73.7	82.9	159.0	387.8	184.2	168.7	149.3	149.3	149.3	186.1	214.2	232.7	232.7	232.7	232.7
Tin plate, domestic, coke	100	94.2	89.2	165.1	337.3	217.8	206.6	196.7	196.7	196.7	196.7	196.7	196.7	196.7	196.7	196.7
Pig tin	100	69.3	87.1	86.6	138.1	207.6	159.2	161.5	156.3	124.7	141.9	134.3	138.3	138.8	124.1	91.3
Pig lead	100	88.6	131.8	156.8	259.1	181.8	127.3	115.9	124.7	145.5	197.7	200.0	209.1	204.5	195.5	193.2
Spelter	100	87.9	379.3	194.8	160.3	151.7	127.6	112.1	136.2	136.2	167.2	158.6	153.4	148.3	139.7	137.9
Petroleum, crude	100	71.4	55.1	106.1	126.5	163.3	163.3	163.3	163.3	173.5	206.7	225.0	249.0	249.0	249.0	249.0
Petroleum, refined, water-white	100	97.6	97.6	97.6	97.6	139.0	142.3	150.4	166.7	178.9	182.1	195.1	203.3	211.4	211.4	211.4
Gasoline, motor	100	83.3	71.4	142.9	142.9	143.5	145.8	145.8	145.8	145.8	153.0	157.7	166.7	169.6	175.0	178.6

[1] Standard war flour.

[2] No quotation.

[3] Prior to January, 1918, prices are for gun metal, button.

Cost of Living in Massachusetts in 1919–20.[1]

A COMMISSION to investigate living costs, especially those of the necessaries of life, was created by the Massachusetts Legislature in 1919. The commission assumed its duties on August 1, 1919, and in accordance with the general demand for action rather than study the commission at once took over many of the duties of the war-time food and fuel administrations.

At that time the Army authorities were about to place on sale the surplus Army stores of food, and the commission was able to effect a considerable saving to the people of the State by obtaining a larger proportion of these supplies than could otherwise have been secured, which, in addition to being sold at a lower price, had the effect of lowering prices on similar goods. An ice famine in the summer and a coal famine in the fall were also dealt with successfully by the commission, and the limited supply of sugar was conserved and distributed as equitably as possible. The housing shortage had resulted in many cases of excessive increases in rentals, and such cases were adjusted by the board with the aid of a group of real estate men who advised as to what constituted a fair increase. About 3,000 cases were adjusted, and the publicity acted as a deterrent to other landlords from making excessive charges. It is stated in the report that while these administrative duties were perhaps outside the legal scope of the commission's authority it was felt that it was the main justification for its existence, since by these measures it had effected such material savings to the people of the State.

In January, 1920, the cost of living in Massachusetts had increased 92 per cent over the cost in 1913. The principal reasons for increases in prices are believed to be (1) the law of supply and demand, under which are included the wastage of war; loss of productivity due to reduction in man power, shorter hours of labor, and labor unrest resulting in strikes, changing jobs, and the tendency to take frequent vacations; extravagant expenditures; foreign exports and imports; (2) currency expansion and inflation of credit; (3) increase in costs of production; (4) increased taxation; and (5) so-called profiteering.

The general effects of increased prices are shown in the variations in commodity prices, in wages and incomes, and in business changes. Food prices were the first to reflect the upward trend, but clothing, while slower in getting under way, has gone to a point much higher than food. This is accounted for by the fact that the period of time between the creation and consumption of food is ordinarily shorter than in the case of clothing, which may be influenced by the price of raw materials of as much as a year previous.

The changes in wages and incomes have been of different kinds. Measuring the "money wage" by the amount of goods which the money will buy—the "commodity wage"—it is found that manufacturers and factory wage earners have gained greatly in their purchasing power while that of professional workers has relatively decreased. The combined index numbers for incomes of professional men and women had reached only 124.1 in 1919, with 1913 taken as a base—lawyers showing a reduction in income, the index for 1919

[1] Report of the Massachusetts Commission on the Necessaries of Life. Boston, February, 1920. 182 pp. House Doc. No. 1500.

being 96.1, and the greatest increase being in the dental profession, in which the index number was 148.7. On the other hand, the combined index number for factory operatives was 219 in 1919, with wages in 1913 taken as 100. In the different industries the index numbers range from 179.2 for machine shop workers to 255.4 for employees in woolen mills. The effect of advancing prices on business has been to create an abnormal condition in which, while there is great prosperity with the smallest number of business failures in 1919 since 1881, the smallest amount of total liabilities since 1904, and the smallest recorded percentage of failures, there is also great danger, since this prosperity is based on credit inflation. Business conditions show a decided change, since, owing to the new wealth in new hands, the demand is for luxury goods, while the former well-to-do members of the community are curtailing purchases, even of necessaries, very greatly. It is stated that many retailers are viewing with alarm the situation which they will have to meet with the termination of the demand for luxuries.

Proposed Remedies for High Prices.

CONSIDERATION of the proposed remedies for high prices, such as price fixing, prosecution of profiteers, decrease in demand, deflation, and legislation, leads to the conclusion by the commission that price fixing is a failure, since anything less than complete Federal control of all commodities defeats its own ends. Likewise, the pursuit of profiteers is considered as a dangerous power which can be used only as a temporary remedy and that in the long run competition is the only reliable and permanent check on excessive profits. The power to cause deflation of both currency and credit lies in the hands of the Federal Reserve Board, but in the exercise of this power there are many factors for consideration and too abrupt and violent a deflation which would bring ruin must be avoided. Much can be done toward curtailing prices, it is stated, by the people at large through reduction of their expenditures to the minimum. Legislation as a remedy is believed to be entirely useless and may do more harm than good, since the laws of economics are unchangeable.

With all these facts in mind, therefore, the commission recommends that ordinances should be passed by the cities and towns or a measure by the State legislature to insure a reasonable degree of heating and repairs by landlords, since this has been used as a means to make tenants leave. Closer supervision of storage of foodstuffs and greater publicity to price changes and movements of food into the State by the State department of agriculture, in conjunction with the State department of health and the Federal Bureau of Markets are advised, as is also an amendment to the law allowing cities or towns of 10,000 or more to establish local markets that will give the department of agriculture more power to compel municipalities to furnish such facilities, the fee charged for market space to be uniform for each market. Establishment by the legislature of a standard weight for a loaf of bread is recommended, and also the establishment of a standard bushel box. Conservation of timber and reforestation are regarded as of the utmost importance, as well as further experimentation in types of crops and methods of farming suitable to the climate and other conditions, so that the large amount

of idle land in the State may be utilized. In conclusion it is recommended that the State bureau of statistics be empowered to collect the necessary data and prepare and publish the index of living costs.

Report of Commission's Study of Prices.

PART II of the report is devoted to a study of the prices and conditions affecting the supply of the various commodities which go to make up the necessaries of life. The percentage distribution of the various budget items used by the commission is the same as that used by the National Industrial Conference Board in its cost-of-living studies, and the average price in 1913 was used as the basis of comparison. Thus the index number in January, 1920, for all living costs was found to be 192 which dropped in February to 190.8. The index number for combined food prices in February, 1920, was 195.5; for combined clothing prices, 291.3; for housing, 131; for fuel, 160.7; and for sundries, 175.9.

The prices of most food items are considered to be somewhat higher in New England than in many other sections of the country, owing to the fact that so many supplies have to come such great distances. For this same reason this locality is more directly dependent on cold storage than any other part of the country. While there is a popular belief that cold-storage food may be unwholesome and that it is used as a means of manipulating markets and raising prices, the conclusion reached by the commission, however, is that the existing State laws in limiting the length of time which goods may remain in storage meet the first objection, and, as to the second, that while in some cases the storage facilities may have been used to influence prices, this is not a sufficient argument against the system and that the remedy lies in better regulation.

It is believed by the commission that speculation, using the word in the sense of advance buying, is necessary, and although in periods of advancing prices dealers whose business makes such advance buying necessary make relatively large profits still the competition in foodstuffs is so keen and sources of supply so numerous that it is not considered that the advance in prices can be ascribed in any marked degree to speculation. The competition of the so-called chain stores has had a tendency to keep down the prices of groceries, but in the case of meats, dealers have been slow in following the market downward.

Reestablishment of agriculture in the State is considered a necessity as there are nearly 2,000,000 acres not under cultivation which are capable of producing crops. This is due to lack of farm help, to western agricultural competition, and to failure to make a reasonable profit.

The average increase in the cost of clothing from 1913 to January 1, 1919, was 186 per cent, more than is shown in any other item of the family budget. As stated before, the prices of these articles reflect the price of raw material much later than in the case of crops which go into direct consumption. In woolen and worsted manufacturing, owing to the cutting off of foreign supplies during the war and the increase in labor and overhead costs, the per cent of increase in

manufacturing costs of yard goods in 1919 over 1915 was 145 while the increase in net profit was 190 per cent.

Cotton goods show an increase of 193 per cent in manufacturing costs of gray cloth for the same period, while the increase in profit was 3,240 per cent. The report states, however, that this increase in profits is not so excessive as it seems since in 1915 the margin of profit was only $0.0082 per pound of goods, a condition which was fast driving the mills to bankruptcy.

The manufacturing cost of shoes has increased 185 per cent from 1913 to 1919, while the increase in cost to the consumer has been 154 per cent for men's shoes and 142 per cent for women's shoes of medium-cost types.

Rents show an average increase in February, 1920, of 31.01 per cent over 1913 for tenement, apartment, and family houses, averaged for a number of cities, while the decline in building reached its lowest point in 1918, being but 21.67 per cent of 1913 building operations.

Fuel prices show an increase in the retail price of stove coal in Boston of 45 per cent in January, 1919, over the same month in 1913, while because the increased use of fuel oils since 1916 has increased the price of all petroleum products heavier than gasoline, the prices of kerosene show an increase of 118 per cent since 1910.

The relative increase in different items included under sundries is greatest for house furnishings and ice, which is 150 and 140 per cent, respectively; for other items the percentage increases are as follows: Reading matter, 100; carfare, 75; tobacco, 60 to 100; organization dues, 50; costs for entertainment, insurance, and church contributions, 50. Drugs and medicines have more than doubled in price.

Retail Price Changes in Great Britain.

THE following table gives for Great Britain the increase over July, 1914, in the cost of food and general family expenditure for July of each year, 1915 to 1920, and for each month in 1920. The food items included in this report are: Ribs and thin flank of beef, both British and chilled or frozen; legs and breast of mutton, British and chilled or frozen; bacon; fish; flour; bread; tea; sugar; milk; butter, fresh and salt; cheese; margarine; eggs; and potatoes.

The table gives percentage of increase and is not one of relative prices, as is the table given for the United States. When making comparisons this should be borne in mind, and to obtain the relative prices it is necessary to add 100 to the percentage as given, e. g., for January, 1920, the increase in cost of food is 136 per cent, the relative price being 236.

The figures represent two comparisons: First, the increase in prices, based on the same kinds and quantities as used in July, 1914; second, the increase, based on the change in the standard of living, resulting from a substitution of one kind of food for another to meet war-time conditions. Since March, 1920, this second comparison has not been secured, mainly owing to decontrol.

The table shows that retail prices of food were 159 per cent higher in July, 1920, than in July, 1914, and that the increased cost of all items in the family budget was 152 per cent.

PER CENT INCREASE IN COST OF FOOD AND ALL ITEMS IN FAMILY BUDGET IN GREAT BRITAIN, BASED ON JULY, 1914.

[Compiled from the British Labor Gazette.]

Year and month.	Food.		All items in family budget.	
	Retail prices (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in consumption).	Cost (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in consumption).
July, 1915	32½			
July, 1916	[1] 61		[2] 41–45	
July, 1917	104	72	[2] 75	
July, 1918	110	[3] 67	[4] 100–105	[3] 75–80
July, 1919	109	[3] 97	105–110	[3] 100
1920.				
January	136	115	125	115
February	135	112	130	115
March	133	107	130	115
April	135	([5])	130–135	([5])
May	146	([5])	141	([5])
June	155	([5])	150	([5])
July	159	([5])	152	([5])

[1] Including tax on sugar and tea.
[2] Not including taxes.
[3] Based on change in standard of food consumption adopted by the Ministry of Food.
[4] The increase, excluding additional taxation, is 7 per cent less.
[5] No longer calculable, mainly owing to decontrol.

Retail Price of Coal in the United Kingdom.[1]

AN INTERESTING statement in regard to the cost of raising coal in the United Kingdom at the present date was made in the House of Commons on May 20, 1920, when the president of the (Government) Board of Trade declared that the costs "could only be estimated from those of past periods, and that in view of the changes in wages which had recently taken place such estimates could only be approximate, especially as the figures relating to the quarter ending March 31, 1920, are not yet available." The present maximum retail price of best Derby coal in central London is 57s. 2d. ($13.91, par) per ton, as compared with 27s. ($6.60 par) per ton in 1913. An analysis of these prices follow:

PRICE OF COAL IN UNITED KINGDOM ON MAY 19, 1920, COMPARED WITH THE YEAR 1913, BY ITEM OF COST.

[1s. at par=24.3 cents; 1d. at par=2.03 cents.]

Item of cost.	Price in 1913.	Price on May 19, 1920.
	s. d.	s. d.
Pit price	13 0	33 5
Railway rate	6 4	8 2
Wagon hire	1 0	1 6
Factorage		4
Distribution charges:		
Wages, loaders and carmen	1 10	4 9
Other cartage charges, including sacks	1 1¾	3 7
Loss on smalls	4	7
Establishment charges, including siding rent	2 5½	3 4
Management and interest		3
Profit	10¾	1 3
Total	27 0	57 2

[1] From Commerce Reports (Washington) for June 18, 1920, p. 1609.

Cost of Living in Uruguay in 1919 Compared with 1913.[1]

THE bureau of statistics and information of the national labor office has published the results of observations, beginning with 1913, relative to the economic situation of the laboring classes, especially as to expenditures for dwelling, food, clothing, etc., and the income per family. From this investigation it appears that in 1913 the balance was in favor of the laborer, while in 1919 deficits of more or less importance are indicated.

The average increase in the cost of living in 1919 over 1913 as shown for the entire country is distributed as follows: 39 pesos ($40.33, par) for food; 58 pesos ($59.97, par) for clothing, and 22 pesos ($22.75, par) for various other items of expense. Rents have remained practically stationary during the period.

Three budgets are given as concrete demonstrations of the extent of increase in the four general groups of expenses. They are as follows:

INCOME AND EXPENSES AS SHOWN BY THREE SELECTED BUDGETS IN 1919 AS COMPARED WITH 1913.

[1 peso at par=$1.034.]

	Income.	Expenditures.						
		Rent.	Food.	Clothing.	Other items.	Total.	Surplus.	Deficit.
Day laborer:	*Pesos.*	*Pesos.*	*Pesos.*	*Pesos.*	*Pesos.*	*Pesos.*	*Pesos.*	*Pesos.*
1913	345.60	36.00	144.00	55.64	57.78	293.42	52.18	.....
1919	(1)	36.00	218.88	87.91	78.58	421.37	.....	75.77
Laborer, married:								
1913	630.00	120.00	173.28	101.32	102.60	497.20	132.80	.....
1919	(1)	120.00	263.30	160.08	139.54	682.92	.....	52.92
Laborer, married, 4 children:								
1913	643.20	168.00	218.48	121.86	108.05	616.39	26.81	.....
1919	(1)	168.00	332.08	191.96	146.96	839.00	.....	195.80

[1] Although the income for 1919 is not given in the report the column headed deficit would seem to indicate that there was no change in income.

The relative prices of food by half-year periods, 1913 to 1919, are are shown in the following table:

RELATIVE PRICES OF FOOD BY HALF-YEAR PERIODS, 1913 TO 1919.

[July–December, 1913=100.]

Period.	1913	1914	1915	1916	1917	1918	1919
January to June		101.5	112.5	111.7	121.0	132.5	139.0
July to December	100	107.0	112.5	115.0	127.0	141.0	(1)

[1] Not reported.

The principal increases reported, expressed in percentages, are: Rice, 70.6; oil, table, 97.9; tapioca, 40; vermicelli, 25; fat (suet), 41.7; eggs, 51.9; beef, 50, and pork, 37.5.

In the city of Montevideo the increase is more pronounced than in the country districts. The following table gives the increase in

[1] Boletin de la Oficina Nacional del Trabajo. Montevideo, May to August, 1919.

average prices of certain articles for June, 1919, as compared with prices in June, 1913:

PER CENT OF INCREASE IN AVERAGE PRICES OF PRINCIPAL ITEMS ENTERING INTO COST OF LIVING IN MONTEVIDEO, URUGUAY, IN JUNE, 1913, COMPARED WITH JUNE, 1919.

Article.	Per cent of increase, June, 1919, over June, 1913.	Article.	Per cent of increase, June, 1919, over June, 1913.	Article.	Per cent of increase, June, 1919, over June, 1913.
Rice	104.3	Milk	25.0	Fish (ordinary)	3.0
Sugar	122.0	Bread	20.0	Potatoes	50.0
Oil, table	125.0	Beans	52.6	Onions	[1] 28.6
Coffee	3.3	Grits	12.5	Moniatos [2]	[1] 33.3
Tapioca	27.3	Salt, table	100.0	Tobacco	57.1
Macaroni	50.0	Salt, coarse	100.0	Alcohol	[1] 84.8
Suet	21.4	Vinegar	87.5	Alcohol, denatured	[1] 23.1
Pasta	66.7	Tea (native)	17.9	Matches	57.1
Corn meal	25.0	Beef	128.6	Firewood	84.0
Flour, wheat	25.0	Mutton	66.7	Kerosene	75.0
Eggs	172.7	Pork	42.9	All articles	52.7

[1] Decrease. [2] A farinaceous root used in bread making.

It is stated that Uruguay produces a major portion of the articles needed for food, and has thus been affected less than have other countries by the high cost of living.

The cost of clothing has gradually increased from 1913 to 1918, the relatives being 100.0, 111.3, 114.3, 122.6, 136, and 158, respectively.

The Food Situation in Austria and Hungary.

Austria.

DR. LOEWENFELD-RUSS, the Austrian food minister, in a recent interview made the following statement concerning the food situation in Austria.[1]

The situation is still extremely unsatisfactory. The 200,000 tons of flour from the Grain Corporation, which are expected to arrive by the middle of May, will enable us to hold out until the beginning of September, and efforts must be made to effect new purchases overseas before that date. The present crisis is mainly due to transport difficulties. The 20,327 tons of grain purchased by the Import Corporation (*Einfuhrgesellschaft*) are somewhere en route from Rotterdam to Austria. Of the 20,000 tons promised by the Italian Government, in return for a corresponding quantity in May, only about 3,000 tons have arrived. The remainder had to be diverted via Villach, owing to the strikes on the Southern Railway (*Südbahn*) and in Jugoslavia, whereby considerable delay has resulted. Of the 40,000 tons purchased in Paris, 13,039 tons are still lying in Holland. Of the 5,000 tons of grain promised by Switzerland, only 1,703 tons of wheat, 540 tons of rye, and 1,507 tons of maize have arrived. With respect to potatoes, fats, meat, and sugar similar difficulties exist. The potato supply is affected by transport difficulties, as well as by the state of exchange; 20,000 tons have now been ordered from Holland and 6,000 tons of seed potatoes from Sweden. An increase in the number of cattle is hoped for, but for the time being it is very difficult to supply the 1,600 tons of meat required to cover Vienna's weekly ration of

[1] Neue Freie Presse. Vienna, Apr. 28, 1920. Evening edition.

10 dekagrams [0.22 pound] per head. Sugar requirements for the autumn are still uncovered.

The whole outlook is, therefore, very gloomy, nor does the justified hope of food credits make any great difference. Austria is incapable of existing as an independent economic territory, and must either be united to a great economic country like Germany or else the former economic connection with the National States must be restored.

Hungary.

IN THE course of an address delivered to the Budapest Society for the Combating of Unemployment, Dr. Emerich Ferenczi stated that the time had come for Hungary to appeal to neutral and ex-enemy countries for relief and to furnish reliable data regarding the growing distress,[2] and said:

Budapest is in urgent need of foodstuffs of all kinds, particularly condensed milk, and of infants' clothes, underwear, clothing, and shoes. Hungary would be able to support herself even in her enfeebled condition were it not for Greater Budapest's 1,600,000 population, which is mainly unproductive. The population of Budapest itself has increased from 863,000 in 1910 to about 1,100,000 on March 14, 1920, and the population of the neighboring communes has probably increased even more. Since during the war the death rate exceeded the birth rate, this increase is mainly attributable to the influx of unproductive elements, including from 50,000 to 70,000 civil servants from occupied territory. Though there has recently been an improvement in certain industries, and though there is actually a labor shortage in the lumber and clothing industries and in some branches of the metal industry, yet there are still whole industries and trades which have been at a standstill for months. The number of persons employed in industries who are compulsorily insured against sickness showed a decrease of 14.3 per cent for the first quarter of the year as compared with the 1917 average.

The main cause of distress, apart from actual unemployment, is the disproportion between the incomes of all the working classes, particularly those with fixed incomes, and the cost of living. While the most important necessaries have risen in price on an average to 67 times the prewar price, salaries have only increased three or four fold and wages 10 to 20 fold. Barely 3 per cent of the population, that is, 30,000 persons, were in receipt of an adequate income. During the period November, 1918, to March, 1920, the weekly rations of foodstuffs in Budapest were decreased as follows: Flour, including the bread allowance, from 7.2 to 3.6 kilograms [15.9 to 7.9 pounds]; sugar, from 0.75 to 0.3 kilogram [1.65 to 0.66 pound]; fats, from 0.3 to 0.1 kilogram [0.66 to 0.22 pound]. Fats have not been issued for a year, and the 0.25 kilogram [0.55 pound] ration of legumes has not been issued for an even longer period. The majority of the population can no longer afford the illicit trade price of 32 or 34 crowns per kilogram of flour [$6.50 to $6.90 at par for 2.2 pounds]. The present daily allowance of bread is 0.12 kilogram [0.265 pound] per head, but in March the Government was 30 carloads in arrears, so that 140,000 persons had to forego their full rations in that month. The supply of meat works out at 0.13 kilogram [0.287 pound] per head per week at 100 crowns per kilogram) $9.20 at par per pound] as against 0.97 kilogram [2.14 pounds] in 1912. The market arrivals of vegetables dropped from 15,000 metric centners [33,069 cwt.] in February, 1914, to 8,100 metric centners [17,857 cwt.] in February, 1920; those of fruit from 11,000 to 8,500 metric centners [24,251 to 18,739 cwt.]; those of potatoes from 9,500 to 3,500 metric centners [20,944 to 7,716 cwt.]; and those of other articles from 61,000 to 27,137 metric centners [134,482 to 59,827 cwt.]. Milk deliveries dropped from 304,753 liters [322,027 quarts] per day in 1913 to 49,895 liters [52,723 quarts] in 1919. The maximum daily allowance for infants under 12 months was 0.5 liter [0.53 quart]. The municipal hospitals were frequently confronted with the problem of how to divide 3 liters [3.17 quarts] milk among 100 patients.

The dangers arising from underfeeding have been intensified by the shortage in dwellings. Hundreds of families are living in railway cars and other structures available for human occupation. Conditions are aggravated by the shortage of wearing apparel. Thousands of children can not go to school in bad weather because they have no shoes. Deaths due to tuberculosis increased from 3,266 in 1912 to 4,611 in 1919, i. e., the rate of mortality from tuberculosis was 43.9 per 10,000 inhabitants. Infant mortality increased during the war from 142.7 per 1,000 in 1912 to 183.3 in 1919.—

[2] Pester Lloyd. Budapest, May 4, 1920.

WAGES AND HOURS OF LABOR.

Hours and Earnings in the Boot and Shoe Industry.

THIS article presents in a summary form the facts as to the hours of labor and the earnings of employees in a number of the more important occupations of the boot and shoe industry in the United States in 1920. There is added a table showing the changes in average hours and earnings since 1913 for each of the selected occupations and for the industry as a whole.

The investigation was confined to establishments whose principal or only products are shoes made by the McKay, welt, or turn process. It covers the manufacture of men's, women's, and children's shoes. Data are not included from establishments whose main or sole products are pegged shoes, or such specialties as slippers, leggings, or felt or rubber boots or shoes.

In mapping out the territory to be covered by the investigation the Bureau selected States on the basis of the number of wage earners in the industry as reported in the Abstract of the Census of Manufactures for 1914. Lapse of time and the disturbing effects of the war have rendered those figures somewhat obsolete, but it is probable that no serious changes have occurred in the relative rank of the different States in the industry. In selecting establishments within the States attempt was made to give each State adequate representation to insure typical results for the State, rather than to cover the same proportion of the wage earners in each State. As a general principle the larger the number of employees in a State the smaller the proportion needed to give typical averages.

The number of establishments and the number of employees reported for each State in the 1914 abstract and the numbers covered by the Bureau's investigation are shown in the following table. It should be noted that the figures are not absolutely comparable, since the Census figures cover several minor varieties of product not represented in the Bureau's figures, and since the Census figures also include salaried employees, who are not included in the Bureau's figures.

TABLE 1.—TOTAL NUMBER OF ESTABLISHMENTS AND EMPLOYEES IN THE BOOT AND SHOE MANUFACTURING INDUSTRY IN 1914, AND NUMBERS FOR WHICH DATA ARE SHOWN IN 1920, BY STATES.

State.	United States Census, 1914.		Bureau of Labor Statistics, 1920.	
	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.
Illinois	47	6,071	5	2,152
Maine	50	8,815	5	2,453
Massachusetts	464	76,944	29	16,342
Michigan	24	2,035	3	567
Minnesota	14	2,012	3	1,028
Missouri	49	13,169	11	5,671
New Hampshire	55	12,937	13	4,953
New Jersey	42	3,834	5	882
New York	235	26,193	13	5,668
Ohio	62	14,461	11	5,526
Pennsylvania	131	13,184	11	3,819
Virginia	8	1,555	3	853
Wisconsin	61	5,772	5	1,294
Other States	113	4,573	.....	.....
Total	1,355	191,555	117	51,208

The pay-roll material on which the following tables are based was gathered in the spring of 1920. Of the 117 establishments covered in the investigation the selected pay-roll periods of 83 terminated in the month of April, 14 in May, 18 in March, and 1 each in February and January. In only one of the 117 establishments, so far as could be ascertained, was there any change in rates of pay during the progress of the investigation. In that establishment an increase in rates averaging approximately 10 per cent was granted after the pay-roll material had been copied by the agents of the Bureau, such increase being retroactive beyond the date of the pay-roll period used by them. As it was found to be impossible to make the necessary changes in the earnings with the requisite accuracy the material from that establishment was tabulated as it was originally copied.

The effort was made to confine the investigation to establishments working full time. In some parts of New England, however, it was necessary to include establishments working only 5 days a week, and in Virginia one pay-roll period of 11 days was taken in a two-week establishment. There were in all 112 one-week pay rolls and 5 two-week pay rolls. Of the former group 10 were for five days only, the rest for six days; of the latter group all were for 12 days except the 11-day pay roll referred to above.

The data concerning hours and earnings on which the tables are based were obtained directly from the pay rolls or other records of the companies by agents of the Bureau. Wherever the records of the company failed to indicate the time actually worked by piece-workers, arrangements were made to have such a record kept for a selected period, and that record was later copied by the agents.

Table 2 presents the results of the investigation in the form of a number of averages. The significance of the figures in the various columns is indicated in a general way by the headings of the columns. For a full discussion of the significance of the figures, the method of computing them and the limitations under which they should be used see the MONTHLY LABOR REVIEW for January, 1920, pages 120

to 124, and May, 1920, pages 96 to 100. A few points need to be particularly noted.

The figures in most of the columns deal with actual hours and actual earnings. They represent conditions as they were found in one particular pay-roll period for each establishment. Under average hours are shown the average hours worked during the selected pay-roll period by employees on one-week pay rolls and by those on two-week pay rolls separately, and the average hours worked per week day and per week by the two combined. The last figure is brought into comparison with the average normal full-time hours of the same employees, and the results of that comparison are shown in the column "Per cent of full time worked."

Under "Actual earnings" are shown the average earnings for the pay-roll period of those on one-week pay rolls and those on two-week pay rolls separately, and the average actual earnings per hour and per week worked for the two combined. The figures for average actual earnings per week are affected by the number of hours per week actually worked by different employees and should not be confused with full-time earnings or the average that would have been shown if all employees had worked exactly full time. Nor can it be safely assumed that average earnings for the year would be 52 times the average per week shown in the table. The last supposition would be true only if the week covered by the investigation was exactly an average week and if all the plants included operated full 52 weeks per year.

Labor in the boot and shoe industry is highly specialized and the number of distinct occupations is very large. For the limited space available in the REVIEW it has been necessary to confine the present report on hours and earnings to a rather small number of the more important occupations. The occupations that have been selected are those for which the Bureau has already published similar detailed studies in earlier years.

TABLE 2.—AVERAGE HOURS ACTUALLY WORKED AND AVERAGE AMOUNT ACTUALLY EARNED IN 1920, BY SEX, DEPARTMENT, OCCUPATION, AND PAY ROLL PERIOD.

Sex, department, and occupation.	Number of establishments with weekly pay period.	Number of establishments with biweekly pay period.	Number of employees in establishments with weekly pay period.	Number of employees in establishments with biweekly pay period.	Average hours actually worked— In weekly pay period.	In biweekly pay period.	Per week day.	Per week.	Full time hours per week.	Per cent of full time worked.	Average amount actually earned— In weekly pay period.	In biweekly pay period.	Per hour.	Per week.
MALES.														
Cutting department.														
Cutters, vamp and whole shoe, hand	87	4	1,999	51	42.1	93.9	7.0	42.0	47.8	88	$35.32	$62.00	$0.850	$35.22
Cutters, vamp and whole shoe, machine	52	3	903	27	43.6	73.7	7.2	43.2	48.9	88	35.51	49.72	.826	35.23
Skivers, upper, machine	26	3	77	10	43.0	83.2	7.1	42.6	48.1	89	27.21	29.25	.596	25.87
Sole-leather department.														
Cutters, outsole	58	2	323	8	46.6	96.6	7.8	46.8	48.4	97	33.54	61.42	.721	33.47
Channelers, insole and outsole	104	4	232	8	46.8	94.2	7.8	46.8	48.8	96	32.83	57.73	.705	32.71
Fitting or stitching department.														
Eyeleters	30	1	74	1	45.3	86.8	7.5	45.0	48.4	93	26.61	34.97	.582	26.49
Vampers	53	2	392	8	43.7	85.6	7.3	43.8	47.9	91	31.00	38.95	.709	30.78
Lasting department.														
Assemblers for pulling-over machine	84	4	668	23	44.0	83.7	7.3	43.8	48.6	90	28.36	45.47	.650	28.20
Pullers-over, hand	25	.....	211	.....	46.2	.....	7.7	46.2	47.0	98	36.87	.....	.817	36.87
Pullers-over, machine	97	4	532	20	44.1	91.0	7.4	44.4	48.8	91	36.83	77.40	.845	36.92
Side lasters, hand	41	1	439	6	44.2	73.8	7.4	44.4	48.2	92	31.06	68.74	.714	31.11
Side lasters, machine	47	4	305	17	44.1	88.2	7.3	43.8	48.9	90	34.39	62.13	.773	34.25
Bed-machine operators	89	4	1,209	43	44.9	87.5	7.5	45.0	48.7	92	35.65	62.26	.796	35.52
Hand-method, lasting-machine operators	28	2	207	6	45.3	97.5	7.6	45.6	48.9	93	36.88	48.59	.808	36.52
Turn lasters, hand	32	1	641	25	44.5	88.7	7.4	44.4	47.1	94	40.00	57.29	.896	39.58
Turn lasters, machine	10	.....	102	.....	44.4	.....	7.4	44.4	48.6	91	33.69	.....	.767	33.69
Turn sewers	29	1	68	3	47.2	93.0	7.9	47.4	49.1	97	45.03	57.11	.959	44.33
Bottoming department.														
Goodyear welters	76	4	399	16	44.0	94.7	7.4	44.4	48.6	91	43.25	81.66	.989	43.19
Rough rounders	78	4	228	12	43.2	96.7	7.2	43.2	48.7	89	40.83	75.35	.942	40.71
Goodyear stitchers	82	4	576	23	45.2	104.4	7.6	45.6	48.6	94	37.33	76.27	.827	37.56
McKay sewers	44	1	157	1	45.6	96.5	7.6	45.6	49.4	92	32.52	60.56	.728	32.50
Heelers	107	4	369	13	45.4	96.1	7.7	46.2	48.7	95	37.86	78.47	.842	37.93
Wood heelers	33	.....	533	.....	44.4	.....	7.4	44.4	47.4	94	40.11	.....	.906	40.11
Heel trimmers or shavers	99	4	277	7	45.1	97.8	7.5	45.0	48.8	92	40.70	65.76	.916	40.51
Heel breasters	96	4	188	7	44.9	94.4	7.5	45.0	48.8	92	32.75	59.40	.732	32.66
Edge trimmers	108	4	803	25	45.4	97.4	7.6	45.6	48.7	94	41.34	77.98	.912	41.29
Edge setters	108	4	813	32	45.3	97.2	7.6	45.6	48.7	94	40.26	67.62	.884	40.04

TABLE 2.—AVERAGE HOURS ACTUALLY WORKED AND AVERAGE AMOUNT ACTUALLY EARNED IN 1920, BY SEX, DEPARTMENT, OCCUPATION, AND PAY ROLL PERIOD—Concluded.

Sex, department, and occupation.	Number of establishments with weekly pay period.	Number of establishments with biweekly pay period.	Number of employees in establishments with weekly pay period.	Number of employees in establishments with biweekly pay period.	Average hours actually worked—				Full time hours per week.	Per cent of full time worked.	Average amount actually earned—			
					In weekly pay period.	In biweekly pay period.	Per week day.	Per week.			In weekly pay period.	In biweekly pay period.	Per hour.	Per week.
MALES—concluded.														
Bottoming department—Concluded.														
Heelscourers	104	4	438	13	44.7	97.9	7.5	45.0	48.7	92	$32.92	$55.23	$0.732	$32.83
Heelburnishers	105	4	293	11	44.2	94.0	7.4	44.4	48.7	91	31.63	52.33	.715	31.46
Buffers	107	4	439	10	45.4	94.0	7.6	45.6	48.8	93	33.23	54.90	.737	33.11
Finishing department.														
Treers or ironers, hand	84	4	893	44	45.1	94.1	7.5	45.0	48.2	93	31.61	52.32	.699	31.37
Treers or ironers, machine	18	.....	169	.....	46.8	.....	7.8	46.8	48.8	96	29.29	.....	.625	29.29
Total	112	5	14,957	470	44.4	91.8	7.4	44.4	48.4	92	35.70	61.51	.808	.....
FEMALES.														
Cutting department.														
Cutters, vamp and whole shoe, machine	10	.....	73	.....	47.4	.....	7.9	47.4	53.8	88	18.60	.....	.415	18.60
Skivers, upper, machine	100	5	585	26	42.9	85.5	7.1	42.6	48.7	87	19.08	26.79	.445	18.84
Fitting or stitching department.														
Tip stitchers	101	5	343	12	43.4	91.3	7.3	43.8	48.7	90	19.51	38.13	.450	19.51
Backstay stitchers	93	5	408	20	43.1	84.0	7.2	43.2	48.7	89	18.37	26.59	.424	18.15
Lining makers	107	5	1,104	45	42.8	76.5	7.1	42.6	48.5	88	16.33	24.70	.381	16.18
Closers-on	45	2	128	5	43.9	90.3	7.3	43.8	49.4	89	16.13	21.49	.366	15.93
Top stitchers or undertrimmers	107	5	1,141	46	43.4	80.8	7.2	43.2	48.5	89	19.71	30.02	.455	19.53
Eyeleters	88	4	225	7	45.2	82.8	7.5	45.0	48.7	92	20.07	33.62	.447	19.99
Vampers	106	5	1,243	70	43.3	84.2	7.2	43.2	48.8	89	22.44	33.78	.518	21.39
Lasting department.														
Assemblers for pulling-over machine	23	.....	77	.....	41.4	.....	6.9	41.4	48.5	85	20.58	.....	.505	20.58
Finishing department.														
Treers or ironers, hand	35	.....	283	.....	45.0	.....	7.5	45.0	49.9	90	17.93	.....	.400	17.93
Total	112	5	5,610	231	43.4	82.6	7.2	43.2	48.8	89	19.31	29.81	.446	.....

[1921]

The Bureau carried on investigations of the boot and shoe manufacturing industry in 1913, 1914, 1916, and 1918.[1] In Table 3 the results of the present investigation are brought into comparison with those of the earlier studies. The comparison is made in the form of relative full-time hours and relative hourly earnings of each of the selected occupations for each year. The hours and the earnings of 1913 have been used as the base or 100. The movement of hours and earnings is obvious from the table. No one will fail to notice the remarkable increase in hourly earnings between 1918 and 1920, which reaches its maximum in the case of male hand-turn lasters. The rise of their relative from 146 to 289 shows an increase in hourly earnings of 98 per cent during the two years.

TABLE 3.—RELATIVE FULL-TIME HOURS PER WEEK AND HOURLY EARNINGS IN SPECIFIED YEARS, 1913 TO 1920, BY DEPARTMENT, OCCUPATION, AND SEX.

Department, occupation, sex, and year.	Relative full-time hours per week.	Relative hourly earnings.
Cutting department.		
Cutters, vamp and whole shoe, hand, male:		
1913	100	100
1914	99	104
1916	99	107
1918	95	138
1920	88	242
Cutters, vamp and whole shoe, machine, male:		
1913	100	100
1914	100	101
1916	99	102
1918	94	137
1920	88	256
Skivers, upper, machine, male:		
1913	100	100
1914	100	100
1916	100	104
1918	93	141
1920	88	199
Skivers, upper, machine, female:		
1913	100	100
1914	99	100
1916	99	100
1918	95	128
1920	89	213
Sole-leather department.		
Cutters, outside, male:		
1913	100	100
1914	99	100
1916	99	101
1918	94	134
1920	87	238
Channelers, insole and outsole, male:		
1913	100	100
1914	100	99
1916	99	102
1918	95	129
1920	88	212
Fitting or stitching department.		
Tip stitchers, female:		
1913	100	100
1914	99	100
1916	99	105
1918	95	132
1920	89	205
Fitting or stitching department—Concluded.		
Backstay stitchers, female:		
1913	100	100
1914	99	101
1916	99	109
1918	95	134
1920	89	217
Lining makers, female:		
1913	100	100
1914	99	99
1916	99	104
1918	94	127
1920	89	201
Closers-on, female:		
1913	100	100
1914	99	99
1916	99	105
1918	96	122
1920	91	189
Top stitchers or undertrimmers, female:		
1913	100	100
1914	99	101
1916	99	105
1918	94	137
1920	89	217
Vampers, male:		
1913	100	100
1914	100	98
1916	100	104
1918	94	138
1920	87	222
Vampers, female:		
1913	100	100
1914	99	99
1916	99	103
1918	95	127
1920	89	211
Lasting department.		
Assemblers, for pulling-over machine, male:		
1913	100	100
1914	100	103
1916	99	107
1918	95	146
1920	88	239

[1] See Bulletin No. 178 of the Bureau of Labor Statistics, covering 1913 and 1914; Bulletin No. 232, covering 1914 and 1916; and Bulletin No. 260, covering 1916 and 1918.

TABLE 3.—RELATIVE FULL-TIME HOURS PER WEEK AND HOURLY EARNINGS IN SPECIFIED YEARS, 1913 TO 1920, BY DEPARTMENT, OCCUPATION, AND SEX—Concluded.

Department, occupation, sex, and year.	Relative full-time hours per week.	Relative hourly earnings.
Lasting department—Concld.		
Pullers-over, hand, male:		
1913	100	100
1914	99	105
1916	99	104
1918	93	144
1920	85	245
Pullers-over, machine, male:		
1913	100	100
1914	100	101
1916	99	107
1918	95	146
1920	88	241
Side lasters, hand, male:		
1913	100	100
1914	100	102
1916	100	107
1918	96	145
1920	89	236
Side lasters, machine, male:		
1913	100	100
1914	97	106
1916	98	105
1918	93	145
1920	87	239
Bed-machine operators, male:		
1913	100	100
1914	100	97
1916	100	106
1918	94	152
1920	88	241
Hand-method lasting machine operators, male:		
1913	100	100
1914	100	97
1916	100	101
1918	96	134
1920	88	226
Turn lasters, hand, male:		
1913	100	100
1914	99	105
1916	100	118
1918	98	146
1920	86	289
Bottoming department.		
Goodyear welters, male:		
1913	100	100
1914	100	100
1916	99	104
1918	95	124
1920	88	197
Rough rounders, male:		
1913	100	100
1914	100	101
1916	99	99
1918	95	119
1920	88	190
Goodyear stitchers, male:		
1913	100	100
1914	100	103
1916	99	110
1918	95	132
1920	88	207
McKay sewers, male:		
1913	100	100
1914	100	106
Bottoming department—Concld.		
McKay sewers, male—Concld.		
1916	99	109
1918	95	141
1920	89	228
Heelers, male:		
1913	100	100
1914	100	95
1916	99	101
1918	95	118
1920	88	199
Heel trimmers or shavers, male:		
1913	100	100
1914	100	97
1916	99	100
1918	95	119
1920	88	204
Heel breasters, male:		
1913	100	100
1914	100	97
1916	99	102
1918	95	132
1920	88	234
Edge trimmers, male:		
1913	100	100
1914	99	98
1916	99	103
1918	95	133
1920	88	222
Edge setters, male:		
1913	100	100
1914	100	100
1916	99	101
1918	95	128
1920	88	215
Heel scourers, male:		
1913	100	100
1914	100	99
1916	99	110
1918	95	139
1920	88	233
Heel burnishers, male:		
1913	100	100
1914	100	102
1916	99	103
1918	95	137
1920	88	226
Buffers, male:		
1913	100	100
1914	100	97
1916	99	103
1918	95	133
1920	88	232
Finishing department.		
Treers or ironers, hand, male:		
1913	100	100
1914	100	99
1916	99	105
1918	95	145
1920	87	248
Treers or ironers, hand, female:		
1913	100	100
1914	96	111
1916	97	119
1918	98	147
1920	91	253

A few occupations have been included in the 1920 investigation for which similar data for 1913 are not available. The following table shows relatives for each of those occupations with the earliest year for which the Bureau has information taken as a base:

TABLE 4.—RELATIVE FULL-TIME HOURS PER WEEK AND HOURLY EARNINGS IN CERTAIN OCCUPATIONS IN SPECIFIED YEARS, 1914 TO 1920.

Year.	Turn sewers, male.		Treers or ironers, machine, male.		Eyeleters, female.		Heelers, wood, male.	
	Relative full-time hours per week.	Relative hourly earnings	Relative full-time hours per week.	Relative hourly earnings.	Relative full-time hours per week.	Relative hourly earnings.	Relative full-time hours per week.	Relative hourly earnings.
1914	100	100	.....	.....	.....	.....	.....	.....
1916	101	110	100	100	.....	.....	.....	.....
1918	100	125	96	140	100	100	100	100
1920	91	239	89	235	94	167	88	190

The movement of hours and earnings in the industry as a whole is reflected in the relatives shown in the following table. These relatives for the industry as a whole, like those for the selected occupations shown in the previous table, are based on the averages for 1913 as 100. For the year 1913 the Bureau possesses data for hours and earnings for the selected occupations only, while for all the other years the data cover all employees in the industry. It was therefore necessary to assume that the relative obtained by comparing averages for the selected occupations for the two years would agree with the relative obtained by the use of averages for all employees. Moreover, the changes in hours and earnings between 1913 and 1914 were so slight that any discrepancy that might arise would have no appreciable influence upon the rapidly changing relatives of later years. The relatives are not based on averages for identical establishments, but each year's averages are computed for the entire number of employees for which the Bureau possesses the necessary information.

TABLE 5.—RELATIVE FULL-TIME HOURS PER WEEK AND HOURLY EARNINGS IN SPECIFIED YEARS, 1913 TO 1920, FOR THE INDUSTRY AS A WHOLE.

[1913=100.]

Year.	Number of establishments.	Number of employees.	Relative full-time hours per week.	Relative hourly earnings.
1913	88	[1] 19,910	100	100
1914	91	53,071	99	101
1916	136	63,634	99	108
1918	143	63,275	95	139
1920	117	51,205	88	232

[1] Selected occupations only.

New Wage Scale of the Alaskan Engineering Commission.

A CIRCULAR (No. 411) issued in March, 1920, by the Alaskan Engineering Commission, with headquarters at Anchorage, Alaska, gives a revised wage scale for hourly employees, effective April 1, 1920. Since publication of the schedule, however, the commission states that it was found necessary further to increase the wages by 2½ cents an hour and by $5 a month to men on monthly basis, effective the same date. The following table gives the scale now being paid to employees of the commission:

HOURLY RATES OF PAY FOR EMPLOYEES OF THE ALASKAN ENGINEERING COMMISSION, EFFECTIVE APRIL 1, 1920.

Occupation.	Rate per hour.	Occupation.	Rate per hour.
	Cents.		*Cents.*
Air-brake men	82½–90	Lathers	87½–90
Baggagemen, train	75	Linemen, construction	82½
Blacksmiths	82½–90	Linemen's helpers	72½
Blacksmiths' helpers	72½	Linemen, pipe	67½
Blacksmiths, special	92½–102½	Loggers	82½–90
Boiler makers	90	Longshoremen	82½
Boiler makers' helpers	72½	Machine hands	75–77½
Boiler makers' helpers, advanced	74½–77½	Machinists	82½–90
Boiler makers, special	92½–102½	Machinists' helpers	72½
Brakemen (over 240 hours)	75	Machinists' helpers, advanced	74½
Brass molders	90	Machinists, special	92½
Bricklayers	87½	Miners	88¾
Carpenters	82½–90	Muckers	78¾
Carpenters' helpers	72½	Painters	82½–90
Calkers, wood	87½–90	Painters' helpers	72½
Conductors (over 240 hours)	92½	Pile-driver men	77½
Coyote men	72½	Pipe fitters	82½
Cranemen	75½	Pitmen	67½
Cranemen, shop	77½	Plasterers	87½–90
Drillers, hand	72½	Plumbers	87½–90
Drillers, machine	77½	Plumbers' helpers	72½
Drillers, machine, helpers	67½	Powder men (with steam shovel or ditcher)	77½
Electricians	82½–90	Radio operators, overtime	90
Engineers, derrick	82½–90	Repairmen, car	82½
Engineers, ditcher	92½	Sawmill men	82½–90
Engineers, locomotive (over 240 hours)	97½	Section men	62½
Engineers, locomotive crane	82½–90	Sheet-metal workers	82½–90
Engineers, steam shovel	92½	Sheet-metal workers' helpers	72½
Firemen, locomotive (over 240 hours)	77½	Spikers	67½
Firemen, pile-driver, locomotive	72½	Steam fitters	87½–90
Firemen, stationary	72½	Strappers	67½
Firemen, steam shovel	72½	Timber fallers	82½–90
Foremen, locomotive crane	67½	Timbermen	72½
Heelers	67½	Tinsmiths	82½–90
Hod carriers	82½	Toolmakers, machinist	90
Laborers, pit	67½	Track layers	67½
Laborers, unskilled	62½		

With respect to men on monthly basis and administrative, supervisory, and clerical employees, the circular provides—

Par. 2. Wages of monthly employees, not employed on an annual basis, will receive an increase of $10 per month, where the wage does not include board, and provided no increase has been granted such employee within the past six months. Where such increase has been granted within the past six months the case will be taken under special consideration.

Where board is furnished, the wages of monthly employees will be raised approximately $5 per month; under the same general restrictions as set forth in the above paragraph.

The exceptions noted in the above two paragraphs will also apply to employees who have been employed during the past six months under new employment contract, or

who have entered into reemployment under the reorganization which took effect December 1, 1919.

Par. 3. In regard to administrative, supervisory, and clerical employees, whose terms of employment are usually on an annual basis, and whose salaries are set to fit the position they are filling, these cases will be considered individually by the heads of departments. Generally speaking, where increases have been granted this class of employees during the past six months no increase in pay will be authorized.

In conclusion the commission announces an increase in the price of board from $1.25 to $1.50 a day, effective April 1, 1920.

New Fair Wage Schedule on Public Works in Manitoba.[1]

A SCHEDULE of hourly wage rates and hours per week applicable in Winnipeg and in the Province of Manitoba outside of Winnipeg and a radius of 30 miles therefrom, from May 1, 1920, to April 30, 1921, has recently been approved by the provincial minister of public works acting under authority of the Manitoba fair wages act, 1916, being section 10 of chapter 121 of the Statutes of Manitoba, 1916. The schedule is as follows:

SCHEDULE OF WAGE RATES PER HOUR AND HOURS PER WEEK ON PROVINCIAL PUBLIC WORKS IN MANITOBA, EFFECTIVE FOR YEAR ENDING APR. 30, 1921.

Occupation.	Rate per hour.	Hours per week.
Laborers, engaged on building construction	[a] $0.60	50
Teamsters	[a] .60	60
Bricklayers	1.25	44
Stonemasons	1.25	44
Marble setters	1.20	44
Mosaic and tile setters	1.00	44
Terrazo workers:		
(a) Layers	.85	44
(b) Helpers	.65	50
Stone cutters:		
(a) Carvers	1.12½	44
(b) Journeymen	1.00	44
(c) Planermen and lath men	.90	44
Plasterers	1.12½	44
Wood, wire, and metal lathers	1.00	44
Plumbers	1.00	44
Steam fitters	1.00	44
Operating engineers on construction:		
(a) Engineers in charge of machines with three or more drums	1.25	50
(b) Engineers in charge of double drum machines	1.12½	50
(c) Engineers in charge of single drum machines	1.00	50
(d) Firemen	.75	50
Sheet-metal workers	.90	44
Painters, decorators, paper hangers, and glaziers	.87½	44
Blacksmiths	.85	44
Electrical workers (journeymen inside wiremen)	.92½	44
Bridge and structural steel and iron workers	1.25	44
Asbestos workers:		
(a) Journeymen	.90	44
(b) First-class improvers	.80	44
(c) Second-class improvers	.70	44
Asphalters:		
(a) Finishers	.75	44
(b) Men engaged preparing, mixing, and heating materials	.60	50
Carpenters	1.00	44

[a] The rate is five cents less in the Province outside of Winnipeg and a radius of 30 miles therefrom.

[1] Data taken from the Labor Gazette, Ottawa, for June, 1920, p. 716.

New Rates of Pay and Requirements of the British Consular Service.

ACCORDING to a report from the United States commercial attaché at London, published in Commerce Reports (Washington) for June 25, 1920 (p. 1753), the British Government is to hold a qualification examination on August 10 for appointments to the consular service. The age limits are 22 to 28 years for the Levant service and 22 to 25 years for the Far Eastern service. It is stipulated that candidates must have served in the Army or Navy or Air Force, but a candidate who, being physically unfit for general service, has served for at least a year in a Government department may be considered eligible. Continuous and systematic schooling up to the age of 17 is required. Examinations will cover such subjects as English, French, general knowledge, and arithmetic—French being considered essential.

Upon passing the examination a probationary period of two years at home will be required, the candidate to receive half salary, or, £150 ($729.98, par), plus the war bonus. The first part of this training consists of an economic course at the London School of Economics, where finance, banking, currency, and commercial law are taught; the second part consists of visits to industrial concerns. There is also a period of training at the head office before the candidate goes abroad. The new scale of salaries paid to consular officers, compared with the old scale, is as follows:

OLD AND NEW SCALE OF SALARIES PAID TO BRITISH CONSULAR OFFICERS.

[£1 at par=$4.8665.]

Position.	Old scale.	New scale.
	£	£
Vice consul	300- 500	300- 600
Consul	600- 800	800-1,000
Consul general	900-1,200	1,200-1,500

It is calculated that a vice consul will attain the rank of consul in about 10 years. In addition to the salaries, it is stated that there are representation allowances ranging from £100 to £400 ($486.65–$1,946.60, par) and rent allowances of £50 to £250 ($243.33–$1,216.63, par). There appears to be a difference of opinion whether the new scale includes the war bonus and the matter is now pending decision.

Minimum Rates of Wages of Agricultural Laborers in England and Wales.

PARTICULARS of revised minimum rates of wages and overtime rates for female workers and for male workers under 21 years of age, as fixed by the Agricultural Wages Board for England and Wales, are given in the British Labor Gazette for June, 1920 (pp. 291, 292).[1]

[1] The revised wages and overtime rates of male agricultural laborers of 21 years of age and over in England and Wales and of all classes of agricultural laborers in Ireland were given in the MONTHLY LABOR REVIEW for July, 1920, p. 111.

The new minimum rates, effective as from May 31, 1920, give to female workers of 18 years of age and over 10d. (20.3 cents, par) per hour in Yorkshire, 8d. (16.2 cents, par) per hour in Somerset, and 7d. (14.2 cents, par) per hour elsewhere in England and Wales, as compared with 7d. and 6d. (14.2 and 12.2 cents, par) previously in force. For girls under 18 years of age the new rates range from 5d. (10.1 cents, par) per hour for those under 14 years to 8d. (16.2 cents, par) in Yorkshire, from 3d. (6.1 cents, par) to 6d. (12.2 cents, par) in Somerset, and from 2½d. to 5½d. (5.1 to 11.2 cents, par) in other districts. These minimum rates are for an 8½-hour day in summer, with an 8-hour day in force during the winter, in some counties, and for an 8 and an 8½ hour day the year round in the others. The revised overtime rates for women of 18 years of age and over are 1s. ½d. (25.3 cents, par) per hour on week days and 1s. 3d. (30.4 cents, par) per hour on Sundays in Yorkshire, 10d and 1s. (20.3 and 24.3 cents, par) per hour in Somerset, and 9d. and 10½d. (18.3 and 21.3 cents, par) per hour in other districts.

For ordinary male workers under 21 years of age the revised minimum rates and overtime rates in 37 counties are uniform as shown below:

MINIMUM WEEKLY RATES OF WAGES AND OVERTIME RATES PER HOUR FOR ORDINARY MALE AGRICULTURAL LABORERS UNDER 21 YEARS OF AGE IN ENGLAND AND WALES.

[1s. at par=24.3 cents; 1d. at par=2.03 cents.]

Age group.	Minimum weekly rate.	Overtime rates per hour.	
		Week days.	Sundays.
	s. d.	s. d.	s. d.
20 and under 21 years	40 0	1 0	1 2½
19 and under 20 years	38 0	0 11½	1 2
18 and under 19 years	36 6	0 11	1 1½
17 and under 18 years	29 0	0 9	0 10½
16 and under 17 years	24 0	0 7½	0 9
15 and under 16 years	19 6	0 6	0 7
14 and under 15 years	15 0	0 4½	0 5½
Under 14 years	10 0	0 3	0 3½

In the remaining counties the minimum weekly rate for those under 14 years is 10s. ($2.43, par), except in two counties where it is 12s. ($2.92, par); for the other ages the rates are generally slightly higher. These minimum rates are for a 50-hour week in summer and a 48-hour week in winter, and include the value of certain allowances in kind, as cottage, food, lodging, milk, and potatoes.

It is stated that no really satisfactory comparison with figures for 1914 can be made, but a comparison of the *minimum* wage for 1920 with the *average* wage for 1914 shows an increase of 140 per cent, the matter of hours not being taken into consideration. It is believed, however, that the actual increase was substantially greater.

New Scale of Wages in the British Pottery Industry.

A NEW scale of wages for the British pottery industry has recently been announced, effective from March 25, 1920, according to a report from the American consul at Stoke-on-Trent, published in the Commerce Reports (Washington) for June 10, 1920.

The consul states that prior to the advances granted under the new agreement, wages in all branches of the industry stood at 50 per cent bonus (incorporated as wages), plus 20 per cent bonus, or a total of 80 per cent above prewar rates, and that the present rate is 50 per cent incorporated, plus 33⅓ per cent bonus, which works out at exactly 100 per cent on prewar pay. It is claimed, however, that the new scale is not equivalent in purchasing power to the prewar wage, and many committees are to be organized immediately to deal with cases of hardship, and particularly with reference to fixing a minimum wage.

The New Schedules.

THE new terms as approved by the executives of the operatives' unions and by the Manufacturers' Federation are as follows:

General provisions.

1. *Wages increase.*—The following to be substituted for the existing rates and war bonus, viz, incorporated, 50 per cent; bonus, 33⅓ per cent.

2. *Placers (biscuit and glost) and sagger makers.*—The base rate per day to be increased from 6s. 8d. to 7s. [$1.62 to $1.70, par] plus 50 per cent and 33⅓ per cent.

3. *Minimum wage for women and girls.*—(*a*) Warehouse women and girls (excluding electrical fittings trade).—All per week, and plus 50 per cent plus 33⅓ per cent.

[1s. at par=24.3 cents; 1d. at par=2.03 cents.]

Age.	s.	d.	Age.	s.	d.
13 years	6	4	18 years	11	9
14 years	7	0	19 years	13	4
15 years	8	0	20 years	14	8
16 years	9	0	21 years	16	0
17 years	10	3			

(*b*) Dipping-house women (excluding dippers, scourers, and electrical ware cleaners).—First year, 12s. [$2.92, par]; second year, 15s. [$3.65, par]; third year, 18s. [$4.38, par]. All per week, and plus 50 per cent plus 33⅓ per cent.

(*c*) Women scourers.—Where rumblers are used for china scouring, scale (*a*) to apply; where hand scouring is done, 2s. [$0.49, par] in excess of scale (*a*) to be paid.

Where any of the above operatives commence at a late age, special arrangements to be made in scales (*a*) and (*c*).

4. *Laborers, stokers, and enginemen.*—Laborers (over 21), 30s. [$7.30, par]; stokers (over 21), 32s. 3d. [$7.86, par]; enginemen (over 21), 35s. [$8.52, par]; all plus 50 per cent plus 33⅓ per cent. Special arrangements to be made in the case of elderly or partially disabled men. Laborers and stokers when left in charge of engine for any length of time, say, half a day or longer, shall be paid enginemen's rates for such time as they shall be so employed.

5. *Packers.*—Where, by reason of exceptional circumstances such as are caused by the abnormal transport difficulties at present prevailing, an unreasonable amount of handling of packages is involved, such payments be made as shall be mutually agreed at individual works to meet the circumstances of each particular case. Any dispute to be settled by a conciliation committee under rule 15 of the late conciliation board.

Electrical fittings trade.

6. *Electrical fittings trade.*—(*a*) Day-wage females.—The day-wage rates to women, which at present consist of the agreed standard plus 20 per cent plus 8⅓ per cent plus the appropriate ministry of munitions award according to age, to be all incorporated and regarded as new base rates, and 10 per cent to be added to such new base rates according the the following scales:

WEEKLY WAGE RATES FOR WOMEN IN ELECTRICAL FITTINGS TRADE.

[1s. at par=24.3 cents; 1d. at par=2.03 cents.]

Age.	Glost and biscuit warehouse.	Pressers, fettlers, dippers, and cleaners.	Glost placers, and biscuit placers working with men in placing houses.	Female printers, decorators, and transferrers.
	s. d.	s. d.	s. d.	s. d.
13 years	12 0	.. ..	.. ..	13 0
14 years	13 1	14 2	15 3	14 1
15 years	14 6	15 3	16 4	15 6
16 years	16 6	16 4	17 5	16 6
17 years	18 9	19 0	19 6	20 11
18 years	23 0	24 0	26 2	24 10
19 years	24 4	26 2	28 4	26 0
20 years	27 0	28 4	30 6	28 4
21 years	29 0	30 6	32 9	30 8

All plus 10 per cent.

(*b*) Piecework, females.—The present piecework rates for women plus 8⅓ per cent and plus the ministry of munitions award to be advanced 10 per cent.

Earthenware branch.

7. *Earthenware flat pressers' attendants.*—The flat pressers' departmental committee to consider the position of these operatives where present allowances do not cover the increase in attendants' wages.

8. *Earthenware potters' attendants.*—(*a*) The following to be the revised minimum scales of wages for potters' attendants, and be applied in lieu of clause 3 (*a*) of the terms of settlement of departmental demands in the general earthenware section, which came into operation on December 19, 1919:

MINIMUM WEEKLY WAGE SCALE FOR POTTERS' ATTENDANTS.

[1s. at par=24.3 cents; 1d. at par=2.03 cents.]

Age.	Mold runners.	Other potters' attendants.	Age.	Mold runners.	Other potters' attendants.
	s. d.	s. d.		s. d.	s. d.
13 years	7 0	7 0	18 years	11 10	11 10
14 years	8 0	8 0	19 years	.....	13 4
15 years	9 0	9 0	20 years	.....	14 8
16 years	9 8	9 8	21 years	.....	16 0
17 years	10 6	10 6			

All plus 50 per cent plus 33⅓ per cent.

(*b*) Any adjustment in the piecework rates necessary to enable the journeymen and journeywomen to pay the above minimum rates to be arranged at individual works—any difference between individual manufacturers and their operatives to be referred to this joint committee for settlement.

9. *Earthenware apprentice transferrers.*—The printers and transferrers' departmental committee to consider the position of these operatives.

China trade—miscellaneous agreements.

10. *China trade.*—(*a*) The annual settling time in the English China Manufacturers' Association and the Parian Association to be March 25 in each year, as in all other branches.

(*b*) Departmental committees of manufacturers and operatives to be set up to consider the following departmental demands now in course of preparation, viz, slip makers, packers, lathe treaders.

11. *Stoppages.*—No stoppages to be made for lighting, sweeping, kale, printers' mixing, or hot water.

12. *Departmental demands.*—The departmental notices given by the operatives to be withdrawn, and departmental committees of manufacturers and operatives to be set up to fix minimum prices where such minimum prices are not already in existence in the following branches: Warehousemen, engravers, earthenware polishers, earthenware dish makers, earthenware saucer makers, earthenware cup makers, earthenware hollow-ware jiggerers, earthenware casters, earthenware mold makers, earthenware cup handlers, earthenware and rock and jet sagger makers, earthenware glost printers and transferrers and fine china notices in this branch, earthenware dippers, firemen and oddmen, kilnmen, slip makers, tile trade, sanitary casters and pressers, fireclay trade, jet and rockingham trade, electrical fittings trade; on the understanding that such minimum prices shall not involve any general advance in wages, and shall become operative and apply to the first full settling week after confirmation by the union and the federation.

13. *Higher existing rates.*—Where higher rates are being paid than provided by this offer the same to remain, and the increase in wages conceded by clause 1 to be added, until such higher rates are altered by giving the usual notice six weeks prior to any 25th of March. Any dispute arising out of this clause to be referred to a conciliation committee under rule 15 of the late conciliation board.

14. *Time recording.*—In order that accurate particulars of time worked may be recorded, all employees, where requested to do so, shall "clock on" and "clock off."

Period and application of new schedules.

15. *Period and application of terms.*—Except where otherwise expressly provided, these terms to apply to all sections of the industry, and to be in settlement of all general, departmental, and individual notices given by either the federation or the unions, or any members thereof six weeks prior to March, 1920, and also any outstanding matters under clause 8 of the terms of settlement of the notices given by the operatives six weeks prior to March, 1919.

16. *Commencement of terms.*—This agreement, except as to clauses 5, 7, 9, 10 (*b*), and 12, to become operative, as from March 25, 1920, if accepted by April 30, failing acceptance within that period to apply to the first full settling week after acceptance by the union; any decisions arising out of the above-mentioned clauses to become operative and apply to the first full settling week after confirmation by the federation and the union.

Wages in Japan in 1918 and 1919.

THE thirty-fifth statistical report of the Department of Agriculture and Commerce of Japan[1] contains (pp. 279–281) a table of average wages in various groups of industries in specified years 1900 to 1918, and a table showing changes in index numbers of wages during the same period for the same groups of industries. Index numbers of wages in specified years, 1900 to 1918, for certain industry groups, are given as follows:

AVERAGE INDEX NUMBERS OF WAGES IN JAPAN IN SPECIFIED YEARS 1900 TO 1918, BY GROUPS OF INDUSTRIES.

[1900=100.]

Year.	Agriculture, etc.	Clothing, etc.	Food and drink.	House building, etc.	Instruments, etc.	Miscellaneous.	Average.
1900	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1905	109.7	112.5	111.2	111.8	114.9	112.4	112.1
1906	111.9	121.5	113.4	121.3	122.1	116.7	118.4
1907	126.0	131.5	125.8	142.9	134.1	138.0	134.1
1908	135.0	136.6	133.0	155.7	141.7	148.6	143.0
1912	156.8	148.4	147.3	165.0	155.5	164.9	157.2
1913	160.1	151.9	152.7	167.7	161.2	166.5	160.8
1914	163.5	151.0	157.2	164.3	157.9	164.9	160.1
1915	159.2	151.2	161.1	161.0	153.6	167.7	158.6
1916	158.4	158.3	167.3	164.6	160.4	173.5	163.1
1917	180.7	183.3	185.4	187.0	187.3	199.6	186.8
1918	239.8	243.8	230.4	253.2	215.0	253.5	245.5

[1] Japan, Department of Agriculture and Commerce. Thirty-fifth Statistical Report. [Tokyo] 1920. 761 pp.

There is also included in the report (pp. 281–313) a table giving wages by occupations in March, June, September, and December, 1918, by city or town, showing the "highest," "common," and "lowest" wages in each month. The following table shows such wages for June and December, 1918. The wages given for each occupation are not necessarily averages for the same number or grouping of localities.

"HIGHEST," "COMMON," AND "LOWEST" DAILY WAGES PAID IN JAPAN IN JUNE AND DECEMBER, 1918, BY OCCUPATIONS.

[1 yen at par=49.85 cents.]

Occupation.	June, 1918.			December, 1918.		
	Highest.	Common.	Lowest.	Highest.	Common.	Lowest.
	Yen.	*Yen.*	*Yen.*	*Yen.*	*Yen.*	*Yen.*
Farm laborers, male [1]	0.89	0.73	0.61	0.96	0.81	0.69
Farm laborers, female [1]	.54	.46	.38	.63	.51	.42
Sericultural laborers, male	.81	.67	.57	[2] .97	[2] .76	[2] .63
Sericultural laborers, female	.53	.44	.35	[2] .57	[2] .47	[2] .38
Silk spinners, female	.65	.40	.27	.67	.47	.30
Gardeners	1.41	1.17	.97	1.69	1.40	1.18
Fishermen	.83	.70	.55	1.12	.89	.71
Weavers, male	1.03	.76	.61	1.13	.85	.67
Weavers, female	.62	.47	.33	.69	.54	.38
Dyers	.95	.71	.53	1.10	.83	.62
Cotton whippers	.99	.86	.64	1.22	1.04	.81
Tailors, Japanese dress	1.21	.93	.65	1.49	1.11	.82
Tailors, European dress	1.52	1.10	.77	1.80	1.37	1.00
Pouch makers	1.23	.98	.73	1.65	1.24	.99
Clog makers	1.17	.92	.71	1.38	1.08	.82
Shoemakers	1.39	1.03	.78	1.66	1.29	1.04
Soy brewers	[3] 21.56	[3] 16.42	[3] 12.37	[3] 26.61	[3] 18.82	[3] 44.72
Sake brewers	[3] 29.30	[3] 22.70	[3] 17.17	[3] 35.50	[3] 26.80	[3] 20.85
Confectioners	.88	.65	.43	1.02	.75	.50
Tobacco cutters	1.11	.82	.59	1.50	1.03	.70
Rice pounders	.69	.56	.48	.83	.70	.56
Carpenters	1.45	1.19	1.03	1.85	1.46	1.25
Plasterers	1.51	1.26	1.08	1.81	1.48	1.25
Stonecutters	1.58	1.38	1.19	1.97	1.68	1.42
Sawyers	1.53	1.27	1.11	1.75	1.52	1.28
Shingle roofers	1.48	1.29	1.10	1.76	1.47	1.23
Tile roofers	1.75	1.47	1.21	2.02	1.74	1.38
Bricklayers	1.73	1.48	1.22	2.19	1.85	1.50
Brickmakers	1.44	1.07	.80	1.58	1.23	.90
Shipbuilders	1.82	1.57	1.27	2.11	1.81	1.51
Floor-mat makers	1.21	1.03	.86	1.49	1.26	1.07
Screen and door makers	1.38	1.16	.95	1.68	1.39	1.14
Paperhangers	1.36	1.07	.85	1.55	1.29	1.01
Cabinetmakers	1.38	1.15	.94	1.68	1.36	1.11
Coopers	1.13	.96	.78	1.36	1.11	.91
Cartmakers	1.28	1.04	.86	1.58	1.27	1.05
Harnessmakers	1.26	1.01	.76	1.52	1.26	1.00
Lacquerers	1.38	1.07	.85	1.58	1.24	.98
Goldsmiths and silversmiths	1.40	1.03	.74	1.68	1.29	.95
Founders	1.43	1.10	.84	1.70	1.28	.91
Blacksmiths	1.43	1.08	.83	1.70	1.30	.97
Potters	1.30	.85	.63	1.48	.98	.74
Oil pressers	1.04	.86	.69	1.28	1.07	.90
Paper makers	.82	.65	.51	1.10	.83	.67
Typesetters	1.04	.79	.59	1.14	.88	.69
Printers	.93	.72	.55	1.04	.82	.62
Day laborers	1.06	.89	.76	1.31	1.10	.92
Servants, male	[3] 9.34	[3] 6.89	[3] 5.19	[3] 10.75	[3] 8.02	[3] 5.63
Servants, female	[3] 6.36	[3] 4.45	[3] 3.26	[3] 7.46	[3] 5.27	[3] 4.01

[1] It is not stated whether farm wages do or do not include board.
[2] Wages are for September; December wages not reported.
[3] Monthly wage.

Wages in Yokohama.

THE following table was compiled from statistics submitted to the British Foreign Office in a report on Japanese labor, noted more in detail on pages 38 to 43 of this issue of the MONTHLY LABOR REVIEW.

COMPARATIVE TABLE OF AVERAGE DAILY WAGES PAID IN YOKOHAMA, JULY, 1914, AND JUNE, 1919, WITHOUT BOARD

[1 yen, at par=49.85 cents.]

Occupation.	Average daily wage.		Occupation.	Average daily wage.	
	July, 1914.	June, 1919.		July, 1914.	June, 1919.
	Yen.	*Yen.*		*Yen.*	*Yen.*
Bookbinders	0.70	1.80	Plasterers	1.15	2.00
Bricklayers	1.30	2.30	Potters	.85	2.00
Carpenters	1.10	2.00	Pouch makers	.70	1.80
Clog makers	.65	.90	Printers	.70	1.80
Day laborers	.60	1.70	Roofers	1.20	2.00
Firemen	.80	2.00	Sawyers	1.15	2.00
Furniture (European style):			Shipwrights	1.15	2.30
Engravers	.90	2.00	Silk handkerchief sewers:		
Joiners	.90	1.80	Male	.50	.....
Painters	.70	1.80	Female	.30	.70
Furniture makers	1.00	2.00	Smiths	1.30	2.20
Gardeners	.80	1.50	Soy brewers	[1] 17.00	[1] 29.00
Goldsmiths	.65	1.80	Tailors (European clothing)	[1] 28.00	[1] 45.00
Joiners	.95	2.00	Tailors (Japanese clothing)	.55	[2] 1.00
Masons	1.25	2.00	Tilers	1.20	2.30
Mat makers	1.20	2.00	Tinsmiths	1.10	1.80
Oil pressers	.42	1.50	Typesetters	.75	1.80
Painters	1.10	1.80	Whitesmiths	.85	.91
Paper hangers	.95	1.50			

[1] Per month.

[2] With board.

VOCATIONAL EDUCATION.

Educational and Vocational Courses for Enlisted Men.

BY VIRTUE of an appropriation by Congress of $2,000,000 for vocational training in the Army for the year ending June 30, 1920, and a fund of $2,500,000 turned over to the education and recreation branch of the Army by the various welfare agencies whose activities were taken over by the War Department, November 1, 1919, the United States Army has for several months been offering quite an extensive educational program to enlisted men.

According to data submitted by the Adjutant General's Office for the month of April, 1920, 100 different courses were being given and 3,335 classes held. The courses have since been increased to 200. There were at that time 3,678 instructors, 613 of whom were commissioned instructors, 1,494 enlisted instructors, and 1,571 civilian instructors. The report shows an attendance of 86,269 men, a number considerably below the actual number of men enrolled, since several of the posts conducting classes had not reported when the statistics for the month were compiled. It is believed that more nearly correct figures would show an attendance of between 100,000 and 125,000 men.

The educational work is as regularly scheduled as military training. The training is voluntary, but when once enrolled as a student the soldier is required to complete the course undertaken, and normally an average of three hours a day, five days a week, is devoted to such training. To carry out the program as outlined by the War Department an educational organization has been set up at Washington and in the various camps and posts. The work is in charge of the war plans division of the General Staff, War Department, and associated with it is a civilian advisory board. The camps, posts, and stations have each their education and their recreation department and their school officers. In addition, there are development experts for each of the courses offered and consulting experts for each of the 17 large departments of study into which all the courses are grouped. These development experts are detailed to the various camps, posts, and stations throughout the service, while the consulting experts are responsible for certain groups of camps where they supervise and direct the educational program.

The training generally given throughout the service includes the following:

Vocational training.—Automotive, electrical, building, textile, food, animal transportation, metal, printing, medical, highway construction and topography, power, music, leather, machine, business, agriculture, and miscellaneous.

Educational training.—Basic courses consisting of penmanship, English, arithmetic, spelling, geography, United States history, civics, and elementary science; advanced courses comprising mathematics, general history, modern languages, economics, and sciences.

Each of the main departments is, of course, further subdivided; for example, the course in agriculture includes truck gardening, horticulture, agronomy, farm mechanics, farm economics, economic entomology and zoology, and animal husbandry.

The report for April shows more than one and one-half times as many enrolled in the vocational as in the educational classes. In addition to the courses mentioned special courses may be given in the special services at the various centers. In all cases practical work is insisted upon. The training given must be valuable not only to the men receiving it, but to the military service and the country as well. The following excerpt taken from the War Department statement is indicative of the attitude of the department toward this phase of its work:

> Henceforth the young man who enters the United States Army will be given a course of training which will be equivalent to an industrial training school. When he has completed the years of his service as a soldier and returns to civil life he will return qualified for a definite occupation. Those who seek expert employees will look to "graduated" Army men as probably the best equipped technically trained men to be had.
>
> The Army training will, however, be broader than merely to fit a man into industry. It will make a better citizen, a broader-minded man in every way. It will bring to thoroughly practical industrial training the culture that can reasonably be combined therewith.
>
> It is proposed to make the Army not only a military force to be trained and ready in time of national emergency, but to make it a great educational institution where young men with the best mental, moral, and physical qualities and with the highest ideals of patriotic citizenship will be produced.

Among the most interesting of the classes are those composed of illiterates and men who can neither read nor write English. With these men school work is compulsory. An enlisted man unable to speak English is at once assigned to an Americanization class. In April, 1920, 5,390 such men were receiving instruction which when they leave the Army will have made them citizens fit to take their place in national life.

An additional appropriation by Congress of $3,000,000 provides for a continuance of the educational work in the Army during the fiscal year 1920–21.

Proposed Training of Management Men.[1]

THE essential supply of men trained for management is, according to Dr. Hollis Godfrey, president of Drexel Institute, Philadelphia, Pa., and formerly of the Council of National Defense, to be met through a recently developed plan of cooperation between industry and the colleges. The necessity for such cooperation, he says, has grown out of three great world needs:

> First, the need of using to the utmost the existing machinery of production and distribution to meet the world shortage of goods out of which have come the high cost of living, social unrest, and industrial confusion; second, the need of developing rapidly new machinery of production and distribution to meet the shortage and the demands of the future; and third, the need of producing a large number of properly trained management men (mind workers in industry from foreman to president) essential for the complete utilization of our present industrial resources and for the speedy development of new industrial capacities. The satisfactory solution of the first two needs, therefore, depends in large measure upon meeting effectively and as speedily as possible the third. Men trained for industry in a well-ordered way will not only aid directly the processes of producing and distributing goods, they will help indirectly by relieving the serious strain which abnormal conditions have placed upon both executives and operatives in industry.

[1] Summarized from "Cooperation between industry and the colleges," by Hollis Godfrey, in Educational Review, Easton, Pa., June, 1920, pp. 42–51; and "Urges elimination of educational waste," in School Life, Washington, D. C., May 1–15, 1920, pp. 4, 5.

The originators of this cooperative plan recognized the fact that no training for management could be effective unless combined with actual experience in the shop, and, furthermore, that specific training for specific jobs must be had in addition to a general knowledge of any industry. They therefore conceived the idea of utilizing all available resources both in industry and in the colleges and of encouraging the development of new ones.

To accomplish this purpose it was proposed that a set of specifications prepared jointly by industry and the colleges should be drawn up setting forth industry's needs and education's ability to meet them. Accordingly data were collected and put into shape, and, in addition, an intensive personal survey was made of a group of great industries and of a group of colleges in the East, Middle West, the Southwest, and the South. This survey, covering a period of six weeks, was based upon the work already done.

The plan itself has been formulated with great care. More than 100 college executives were consulted regarding it and more than 30 college executives and 70 industrial executives worked on the specifications. As a result many valuable suggestions and much constructive criticism were received and embodied in the final draft. The joint specifications were approved by the Technology Clubs Associated at its meeting in Philadelphia, March 26 and 27, 1920, and, up to May 15, 200 firms and corporations had also approved and subscribed to the plan as set forth in them.

Industry and the colleges will be brought together for the accomplishment of the end defined in the plan by a joint industrial-educational body, or cooperative committee in which industry will be represented by an industrial agency to be known as the council of management education, and education will be represented by the American Council on Education.

The work of the council of management education is to be that of determining for each industrial group represented in the movement the needs of industry as regards quantity and quality of management men, of keeping these requirements up to date year by year, of specifying the types of men to be produced by the colleges, and of helping to improve the processes and increase the resources for developing the men desired. The council of management education will also determine and publish such educational opportunities as can be offered undergraduates through cooperative summer courses. It will also undertake to inform graduates of the opportunities in the industrial field for management work. * * *

The American Council on Education, on the other hand, is prepared to bring educational opinion to bear upon the strictly educational problems involved in this great undertaking, and to serve as a medium of communication between the colleges and industry. * * *

The work of the cooperative committee will be that of a clearing house in which the specifications of industry, of jobs and men will be refined and clarified. It will also decide upon the best educational processes for the accomplishment of specific ends. In a word, it will review and coordinate the work of cooperation undertaken by the two organizations already discussed.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries in June, 1920.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in June, 1920, from representative establishments in 13 selected manufacturing industries and in coal mining. Comparing the figures of June, 1920, with those of identical establishments for June, 1919, it appears that in 10 industries there were increases in the number of persons employed. The largest increases, 42.9 per cent, 20.4 per cent, and 15.6 per cent, appear in men's ready-made clothing, car building and repairing, and paper making. Four industries show decreases, the largest being 3.1 per cent in leather manufacturing.

All industries show increases in the total amount of the pay roll for June 1920 as compared with June 1919. The greatest increases, 99.7 per cent, 57.4 per cent, and 48.1 per cent, appear in men's ready-made clothing, paper making, and coal, while the smallest increase, 12.2 per cent, is shown in the woolen industry.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JUNE, 1919, AND 1920.

Industry.	Establishments reporting for June, both years.	Period of pay roll.	Number on pay roll.			Amount of pay roll.		
			June, 1919.	June, 1920.	Percent of increase (+) or decrease (−).	June, 1919.	June, 1920.	Percent of increase.
Iron and steel	113	½ mo.	168,332	190,072	+12.9	$10,346,834	$14,576,514	40.9
Automobile manufacturing	43	1 wk.	119,649	133,416	+11.5	3,368,889	4,544,703	34.9
Car building and repairing	48	½ mo.	49,251	59,289	+20.4	2,668,837	3,766,262	41.1
Cotton manufacturing	54	1 wk.	41,478	42,403	+ 2.2	745,091	996,710	33.8
Cotton finisning	16	do.	12,031	12,487	+ 3.8	258,056	341,299	32.3
Hosiery and underwear	53	do.	25,803	26,312	+ 2.0	414,712	571,142	37.7
Woolen	50	do.	44,435	44,850	+ .9	925,028	1,037,795	12.2
Silk	43	2 wks.	12,408	12,340	− .6	438,496	552,111	25.9
Men's ready-made clothing	42	1 wk.	17,190	24,573	+42.9	386,170	771,347	99.7
Leather manufacturing	31	do.	13,798	13,365	− 3.1	302,214	371,501	22.9
Boots and shoes	70	do.	55,705	60,090	+ 7.9	1,134,367	1,493,656	31.7
Paper making	55	do.	27,872	32,226	+15.6	621,973	978,982	57.4
Cigar manufacturing	48	do.	15,129	14,997	− .9	244,318	343,232	40.5
Coal mining (bituminous)	67	½ mo.	19,667	19,616	− .3	976,183	1,445,786	48.1

Comparative data for June, 1920, and May, 1920, appear in the following table. The figures show that in five industries there was an increase in the number of persons on the pay roll in June as compared with May, and in nine a decrease. The greatest increases, 5.3 per cent and 3.2 per cent, are shown in iron and steel and car building and repairing, while decreases of 6.4 per cent, 5 per cent, and 3.7 per cent appear in woolen, hosiery and underwear, and leather manufacturing.

When comparing June, 1920, with May, 1920, seven industries show an increase in the amount of money paid to employees and seven show a decrease. The most important increases, 17.8 per cent, 11.8 per cent, and 10.1 per cent, appear in cotton finishing, cotton manufacturing, and coal. Woolen and men's ready-made clothing show respective decreases of 17 per cent and 8.6 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MAY AND JUNE, 1920.

Industry.	Establishments reporting for May and June.	Period of pay roll.	Number on pay roll.			Amount of pay roll.		
			May, 1920.	June, 1920.	Per cent of increase (+) or decrease (−).	May, 1920.	June, 1920.	Per cent of increase (+) or decrease (−).
Iron and steel	114	½ mo.	173,833	183,004	+5.3	$13,248,900	$14,213,114	+ 7.3
Automobile manufacturing	43	1 wk.	127,526	124,443	−2.4	4,488,810	4,249,162	− 5.3
Car building and repairing	41	½ mo.	50,845	52,480	+3.2	3,207,686	3,331,317	+ 3.9
Cotton manufacturing	50	1 wk.	37,743	38,100	+ .9	808,565	903,797	+11.8
Cotton finishing	16	do.	12,266	12,487	+1.8	289,815	341,299	+17.8
Hosiery and underwear	54	do.	28,410	26,991	−5.0	596,539	589,343	− 1.2
Woolen	49	do.	47,606	44,556	−6.4	1,239,308	1,028,794	−17.0
Silk	44	2 wks.	13,494	13,238	−1.9	631,830	602,855	− 4.6
Men's ready-made clothing	39	1 wk.	21,843	21,143	−3.2	711,160	649,795	− 8.6
Leather manufacturing	31	do.	13,885	13,365	−3.7	374,310	371,501	− .8
Boots and shoes	67	do.	57,960	57,430	− .9	1,458,591	1,464,454	+ .4
Paper making	55	do.	32,195	32,226	+ .1	955,334	978,982	+ 2.5
Cigar manufacturing	49	do.	14,381	14,241	−1.0	328,587	325,093	− 1.1
Coal mining (bituminous)	82	½ mo.	22,423	22,351	− .3	1,503,144	1,655,652	+10.1

In addition to the data presented in the above tables as to the number of employees on the pay roll, 107 plants in the iron and steel industry reported 159,119 employees as actually working on the last full day of the pay-roll period reported for June, 1920, as against 140,932 for the reported pay-roll period in June, 1919, an increase of 12.9 per cent. Figures given by 107 establishments in the iron and steel industry for June, 1920, and May, 1920, show that 153,000 employees were actually working on the last full day of the pay period reported for in June, 1920, as against 142,518 for the period in May, 1920, an increase of 7.4 per cent.

Wage Changes.

IN 13 of the 14 industries there were establishments reporting wage rate increases during the period May 15 to June 15, 1920. One industry made no report of any changes in wage rates. Of the establishments reporting, many did not answer the inquiry relative to this item, but in such cases it is not likely that changes were made.

Iron and steel.—An increase of approximately 10 per cent was given to 7 per cent of the employees in one plant. Two mills reported an increase of 8 per cent, affecting 75 per cent of the force in one mill and 40 per cent in the other. One concern granted a 5 per cent increase to 40 per cent of the workers.

Automobiles.—One plant granted an increase of 10 per cent to about 11 per cent of the force, while another plant granted an increase of 2 per cent to 38 per cent of the force.

Car building and repairing.—One establishment reported an increase of 10 per cent, affecting 12 per cent of the employees.

Cotton manufacturing.—An increase of 15 per cent was granted by 19 concerns, affecting the entire force in 16 concerns, 99 per cent in one, and 95 per cent in another, while one concern did not state the number affected. All employees of 4 firms were given an increase of approximately 15 per cent. Increases ranging from 10 to 15 per cent were granted to the entire force by one firm. An increase of about 10 per cent, to all men, was given by one establishment. One mill reported an 8 per cent increase to all employees.

Cotton finishing.—Eleven establishments reported an increase of 15 per cent, affecting the entire force in 9 establishments and 95 per cent of the force in another, while one establishment did not report the number affected. An increase of 10 per cent was granted by two firms, affecting all the employees in one firm and 15 per cent of the employees in the other.

Hosiery and underwear.—Five establishments reported an increase of 15 per cent, affecting the entire force.

Woolen.—An increase of 15 per cent was granted by 45 mills, affecting the entire force in 14 mills, 99 per cent of the force in one mill, and approximately 95 per cent of the force in 30 mills. All the employees in one establishment were given increases ranging from approximately 7½ per cent to 9 per cent.

Silk.—All the employees of one mill were given an increase of 15 per cent.

Leather manufacturing.—One establishment granted a 15 per cent increase to the entire force. An increase of 12½ per cent was given to two-thirds of the men by one concern, and another concern gave a 10 per cent increase to all employees. All the workers in one plant received a 5 per cent bonus. One mill reported increases of 7 per cent, 4 per cent, and 3½ per cent, affecting 2 per cent, 7 per cent, and 27 per cent of the force, respectively.

Boots and shoes.—Two establishments reported a 30 per cent increase, affecting 20 per cent of the men in the one establishment and 12 per cent of the men in the other. An increase of 23 per cent was granted to about 2 per cent of the employees in one plant, and another plant granted an increase of 20 per cent to all employees. About 2 per cent of the men in one firm received an increase of 12⅞ per cent. The entire force of one mill was granted a 5 per cent increase.

Paper making.—An increase of 11 per cent was given by one mill to 40 per cent of the employees. An increase of approximately 10 per cent was received by all workers in two plants, while another plant granted an increase of 9 per cent to 12 per cent of the employees. An increase of about 7½ per cent, affecting all employees, was reported by two plants. Four establishments reported an increase of 7 per cent, affecting the entire force in three concerns, and 6 per cent of the force in the fourth concern. One establishment gave an increase of 6½ per cent to about 94 per cent of the force, and another establishment reported a general increase in wages, but made no other statement.

Cigar manufacturing.—In one concern 90 per cent of the employees were given an increase of 10 per cent. Another plant reported increases ranging from 7½ to 10 per cent, affecting 50 per cent of the force.

Coal.—All employees in one mine were granted an increase of 26 per cent, and another mine gave an increase of 12½ per cent to 10 per cent of the employees.

Extent of Employment of Women and Minors in Montevideo, Uruguay.

THE United States Consul at Montevideo, Uruguay, under date of May 3, 1920, reports that the National Bureau of Labor has sent the following statistics to the Senate regarding the number of women and minor children who are at present working in the factories of that city:

WOMEN EMPLOYED IN FACTORIES IN MONTEVIDEO, BY NATIONALITY AND CONJUGAL CONDITION.

Nationality.	Number.	Conjugal condition.	Number.
Uruguayan	4,489	Unmarried	4,425
Spanish	256	Married	552
Italian	163	Widows	183
Argentinian	125		
Others	127	Total	5,160
Total	5,160		

It is noted that the married women and widows have 851 children. There are 3,141 minor children to be found in the factories of Montevideo. The statistics further show that there are to be found in general industrial and commercial work the following numbers of women and minor children:

Women	8,219
Girls	2,455
Boys	11,218
Total	21,892

Opportunities for Employment of Women in Australia.

THE commission sent to Australia in the latter part of 1919 by the British Government, "to ascertain what openings there might be for the employment and settlement of women upon the land, and what demand, if any, existed for women in industrial, commercial, and other classes of occupations," submitted its report to the Secretary of State for the Colonies and President of the Oversea Settlement Committee, in June, 1920.[1] The report lends little encouragement to the idea that unemployment among women in England can be materially relieved by emigration to Australia. There is a demand for women in many of the normal occupations of women, but only those who are trained and experienced workers are desired, and the authorities view with alarm any scheme of assisted migration which may tend to create an oversupply of woman labor for factories and thus reduce the standard of living. Teachers for the State schools are not required, and there is no demand whatever for

[1] Great Britain. Oversea Settlement Committee. Report of delegates appointed to inquire as to openings in Australia for women from the United Kingdom. London, 1920, 24 pp. Cmd. 745.

clerks or typists, or shop assistants. Women as agricultural workers are not wanted, and the commission records its conviction that "any attempt to introduce women as agricultural laborers would meet with the strongest opposition, not only from organized labor, but from every section of the community."

There is a strong demand for women as domestic servants, but the account given of the conditions and wages prevailing does not seem likely to attract women from England or elsewhere. An attempt is being made in New South Wales to standardize hours and conditions, but this is as yet in its incipiency, and in general "the worker's daily duties are determined by the individual employer." Women who lack training as domestic servants can not hope to succeed, the commission found, and since there are no facilities for training in Australia, this must be secured before leaving England. The women who before the war were sent out as domestics were often very unsatisfactory, and it is important that if any attempt is made to renew such work, the migrants should be selected with care, and proof should be required of their experience and ability.

While there is no demand for women as agricultural workers, there are chances for groups of women working together to make a success of farming, dairying, truck growing, and the like. The essentials for success in such ventures are (1) a sufficiency of capital; (2) previous agricultural experience; (3) settlement upon good, improved land. Lacking these, success is unlikely.

WOMEN IN INDUSTRY.

Hours and Conditions of Work for Women in Industry in Virginia.

A REPORT (Bulletin No. 10) recently issued by the Women's Bureau of the Department of Labor gives the result of a survey of hours and conditions of work for women in industry in Virginia. The survey was made, at the request of the governor of Virginia, in the last quarter of 1919, in cooperation with the State bureau of labor and industrial statistics, for the purpose of securing a foundation of facts upon which legislation might be enacted in the interest of women workers. The survey covered 146 establishments employing 18,781 women, or 53.8 per cent of the total employees in these plants. Of the total women employed, 10,344 were employed in the tobacco industry. Briefly stated, it was found that 46.2 per cent of the women were working 10 hours or more a day; 11.1 per cent worked 8 hours or less; 40.3 per cent worked over 54 hours a week; 19.3 per cent worked 48 hours or less a week. Slightly over 3 per cent of the women were working at night.

The data as to daily hours of work are shown, by industries, in the following table, which covers 144 of the 146 plants:

NUMBER OF WOMEN WORKING EACH CLASSIFIED NUMBER OF DAILY HOURS IN 144 PLANTS IN VIRGINIA IN DECEMBER, 1919, BY INDUSTRIES.[1]

Industry.	Under 8 hours.		8 hours.		Over 8 and under 9 hours.		9 hours.		Over 9 and under 10 hours.		10 hours and over.[2]		Total.	
	Plants.	Women.	Plants.	Women.	Plants.	Women.	Plants.	Women.	Plants.	Women.	Plants.	Women.	Plants.	Women.
Tobacco	....	.....	....	.....	4	2,454	6	1,239	8	906	28	5,048	46	9,647
Textile	....	.....	....	.....	2	454	1	61	1	46	12	2,299	16	2,860
Clothing	2	1,188	5	420	1	46	4	299	3	186	1	67	16	2,206
Hosiery and knit goods	....	.....	1	230	1	132	....	.....	....	.....	3	420	5	782
Bakeries and other food products	....	.....	2	6	1	36	4	97	10	366	1	29	18	534
Boots and shoes	....	.....	....	.....	4	485	....	.....	....	.....	....	.....	4	485
Paper and paper products	....	.....	1	65	4	140	2	110	2	36	4	134	13	485
Peanuts	....	.....	....	.....	....	.....	....	.....	2	97	2	106	4	203
Printing and publishing	1	41	1	48	7	208	....	.....	....	.....	....	.....	9	297
Miscellaneous	....	.....	1	3	5	96	2	150	3	44	5	219	16	512
Total	3	1,229	11	772	29	4,051	19	1,956	29	1,681	56	8,322	[3] 147	18,011
Per cent of women employed in each hour group	6.8		4.3		22.5		10.9		9.3		46.2		100	

[1] In 2 plants employing 41 women the daily hours of work were not reported. The hours of 729 women employed on night shifts in 6 plants are not included in this table.

[2] Two plants, employing 405 women, in the tobacco industry worked over 10 hours.

[3] The total number of plants reporting hours worked was 144. Three of the tobacco plants, however, reported workers in more than one hourly classification, and are therefore counted more than once, making the apparent total 147 instead of 144.

As to working conditions the report states that equipment, cleanliness, and other conditions of buildings and workrooms in the majority of establishments were very unsatisfactory from the viewpoint of comfort, sanitation, and efficient management, and that provision for the comfort and health of workers was most inadequate. Superintendents of many plants, it is stated, requested advice and assistance in raising the standard of working conditions. As a result of the survey, which included many conferences with employers, workers, and others interested in the subject, the Women's Bureau recommends that the following standards be established either through specific laws or through legislation empowering the State Bureau of Labor and Industrial Statistics to regulate conditions of employment:

Hours.

1. Women should not be required or permitted to work more than eight hours in any one day.
2. Women should not be required to work more than one-half day on Saturday.
3. Not less than 30 minutes should be allowed for a meal in each working day.
4. No woman should be employed between the hours of 12 midnight and 6 a. m.
5. The time when the work of women employees shall begin and end and the time allowed for meals should be posted in a conspicuous place in each workroom, and a record should be kept of the overtime for each woman worker.

Working conditions.

1. Where women are employed there should be provided one toilet for every 20 women and one toilet for every additional 15 women or fraction thereof. These toilets should be properly screened, should have outside ventilation, and should be kept in a clean and sanitary condition.
2. Washing facilities with hot and cold water, soap, and individual towels should be provided.
3. Drinking water should be cool and accessible, with individual drinking cups or sanitary bubble fountains provided.
4. Cloakroom facilities should be provided, and provision made outside of the workroom for eating lunch and resting.
5. Adjustable seats with backs should be supplied for all woman workers.
6. The dust-protection law in Virginia should be extended to include protection in all processes involving exposure to dust and fumes.

Administration of labor laws.

1. One or more women should be appointed in the bureau of labor and industrial statistics with full authority to investigate conditions and enforce the laws.
2. There should be an adequate number of inspectors to enforce the laws regulating conditions in industrial establishments.

First Report of the Indiana State Department of Women and Children.

THE department of women and children established by an act of the Indiana General Assembly of 1919 began its work as a department May 1, 1919, and the first report of its operations has been issued as a part of the annual report of the State industrial board for the year ending September 30, 1919.

This report states that for the five months' period intervening between its formation and the issuance of the report the department has a good record of accomplishment to its credit. In addition to carrying out the varied and exacting details incident to organization, the department of women and children, in order to meet the

demand for such information throughout the State, made a complete compilation of all laws and parts of laws relating to the employment of women and children. By this means employers and others interested in the subject were afforded first-hand reliable authority.

The director of the department also assisted in working out such changes in the State system of issuing employment certificates to minors as would bring it into accord with the requirements of the Federal child labor act and obviate the necessity and confusion of a dual employment certificate system. The plan as finally adopted by the State department and approved by the Bureau of Internal Revenue imposes no additional work upon the school executives who issue the certificates beyond what is already required by State law except the mailing of a duplicate of each certificate issued to the industrial board.

An investigation made by the department of 122 minors 16 years of age and under who were injured in the industries of the State during a two months' period showed 31 per cent illegally employed. Moreover, a summary of the routine work done by the department, in addition to the special services rendered, includes the inspection of 41 plants employing women and children, the issuance of orders to 252 plants, the issuance of 43 orders for violations covering 119 cases of child labor, and other items indicative of the regular scope of the department's activities.

The following is the plan of organization approved by the Governor and industrial board, which became effective October 1, 1919:

Plan of the organization of the Department of Women and Children.

I. Name:

Department of Women and Children, Industrial Board of Indiana.

II. Scope of work:

1. Inspect all places employing women and children for the purpose of carrying out the provisions of all laws or parts of laws pertaining to women and children.

2. Confer with employers on the particular problems in their own plants, especially those brought about by new and changing conditions to which no existing standards apply.

3. Make such special studies and surveys as the Industrial Board may deem advisable to a further legislative program for adequate protection of the general welfare of women and children.

4. Cooperate with the Department of Public Instruction, including the Vocational Department, State Board of Truancy, State Board of Health, State Employment Commission, Federal Children's Bureau, Women's Bureau of the U. S. Department of Labor, and all other agencies having for their purpose the welfare of women and children.

5. Make monthly reports requested by Internal Revenue Department and the U. S. Department of Labor on subject of employment certificates, duplicates of which are filed with the Industrial Board.

III. Organization:

1. A director under the control and direction of the Industrial Board.

2. Two assistants, one for each of the two districts into which the State shall be divided.

3. One stenographer-clerk.

IV. Division of work:

1. District one: That part of the State north of the southern boundary of Vermilion, Fountain, Montgomery, Clinton, Tipton, Grant, Blackford, and Jay counties. Full time of one assistant.

2. District two: That part of the State south of the southern boundary of the above-named counties. Full time of one assistant.

3. State in general: Director of department to give all time not required for administrative work to field work throughout the State.

V. Records:
1. Regular inspection record cards containing points covered by existing standards, and additional information desired by the Industrial Board.
2. Special schedules for surveys or studies as directed by the board.

VI. Reports:
1. Weekly report of each assistant to the director.
2. Monthly reports of the director to the board.
3. Such other reports as the board may from time to time request.

Employment of Women in France Before and After the War.[1]

THE economic stagnation in France caused by the declaration of war was immediately followed by industrial activities, and the demand for labor made it necessary to employ a large number of women to fill places which had theretofore been occupied by the mobilized men. There are no statistics as to the total number of women leaving domestic service or seasonal employment to accept work in regular occupations, but the partial figures available show the scope of the movement.

Two investigations have been made by the minister of labor relative to the employment of women in such establishments as are subject to inspection by the department The first covered 52,278 establishments, employing under normal conditions 487,474 women. Soon after mobilization this number fell to 199,107. In July, 1915, the number exceeded 400,000, and in July, 1917, there were 626,881 women employed in these establishments.

The investigation made in 1918 covered only 41,475 establishments and showed the following results: In July, 1914, there were 454,642 women employed; in August the same year 179,398; in July, 1917, 543,025; and in July, 1918, 533,523.

The trades in which there was an increase in the number of women employees were naturally those engaged in work for the national defense. Thus for every 100 women employed in 1914 there were in July, 1918, 677 in the metal trades, 461 in transportation and maintenance, 301 in building trades, 156 in woodworking, and 141 in the chemical trades.

The trades which showed a decrease in the number of women employed were those in which generally lower wages obtained. In the manufacture of food products there was in July, 1918, 69 per cent of the prewar number employed; in textiles 92 per cent, and in the printing trades 73 per cent.

In July, 1914, women formed 32.8 per cent, and in August, 1914, 38.2 per cent, of all employees in the establishments studied. This increase in ratio was not due to the employment of a larger number of women, but to the decrease of male employees through mobilization. Later, when industrial activity was resumed, this percentage increased to about 40 and was maintained at this point with slight changes from July, 1915, up to the signing of the armistice.

The department caused a third investigation to be made on the same lines as the first two, except that it was limited to establish-

[1] La Probleme du Travail Feminin. Association Francaise pour la Lutte contre le Chomage, etc., June, 1919. 28 pp. Paris. Bulletin No. 26.

ments engaged in work for the national defense and included a certain number of State-operated arsenals and workshops.

In October, 1914, there were 446,210 women employed and in October, 1918, 600,733 in the establishments canvassed, showing an increase of 34.6 per cent during the last year of the war. Women formed 47 per cent of all employees in the health service, and for every 100 women employed in manufactures of war on January 1, 1916, there were 361 in January, 1918. Outside of the industrial establishments there were 132,468 women employed at the latter date by the war ministry in its various bureaus and warehouses.

During the war these women were engaged in the most varied occupations, and there are but few occupations in which they were not employed as substitutes for men. At first they were employed upon work requiring more skill than strength, but later they were called upon to perform laborious tasks, and to do work calling for able-bodied workmen. In this class of work that most suited to their ability was found in the innumerable tasks included under the term "works of maintenance." Here they were engaged in loading and unloading raw materials in the steel works, forges and rolling mills, ship cargoes on the docks, and packages and goods in the railway stations. In inside shopwork they performed such arduous tasks that intervention in their behalf became necessary.

Frequently they carried on transportation by wheelbarrows, hand carts, etc., or by means of horse-drawn vehicles, auto trucks, and electric cars.

A large number of women were employed in the inspection of manufactured articles; they examined munitions, verifying the dimensions of the different pieces of ordnance in factories engaged in war manufactures. The checking and examining of the articles produced were almost exclusively done by women. In addition they were charged with making inventories, and in marking, storing, ticketing, sorting, and packing the goods. In these last-mentioned occupations they showed remarkable ability, as well as in packing cartridges and weighing powder charges, and they have been employed with success in nailing boxes, assembling and putting together the panels of barracks, etc.

Comparison of Women With Men Workers.

IN general the work done by women has been satisfactory, and it would have been more so had there been greater care taken to place them with respect to their individual capacities. A comparison of their work with that of men shows that women fall short in production, but the general opinion prevails that they are more attentive, and often more skillful and zealous than men. They are more subject to fatigue, less regular in reporting for work, and finally, for a given piece of work, it is necessary to employ a larger number of women than men. In continuing the comparison it must not be assumed that these conclusions are general as to all classes of work. In machine weaving and work done in a series of operations automatically by power tools women equal the men in execution, but in more arduous tasks where greater physical exertion is demanded rather than alertness of movement they are not equal, and under all conditions specialization is necessary.

Observations, especially those made in the Toulouse district, lead to quite definite appraisement of the value of women's work compared with that of men's. With the exception of one process, 4 women were required to perform the amount of work done by 3 men. For handwork divided up into a series of operations in which the worker is a specialized handworker, the production of women workers is in inverse ratio to the effort required in each operation. In the manufacture of large and heavy shells the employment of women was not advantageous, but in handling the smaller sizes the contrary was true. It was admitted that in working before fires 2 women were not worth 1 man, but on the other hand women showed remarkable results when operating instruments of precision, electric machines, and electric cranes.

In general, it was found that the employment of women necessitated an increase in the number necessary to complete any given piece of work; either more women than the normal number of men were required or they had to have the assistance of men. The increase in the number of employees is estimated at one-quarter at least, and not more than one-third as a maximum. Often it became necessary to include skilled workmen in the group of women workers until such time as their apprenticeship should be terminated. In machine trades women have not been charged with the sharpening or adjustment of the tools. For this reason the organization of a shift has in general been as follows: A number of good tool men were assigned to the machines while the women were engaged in doing the mechanical part of the work and in measurements. Thus a workshop which formerly employed 16 men and 16 women later employed 32 women and 7 men as machine men, freeing 9 men, and in another where 8 women and 8 men were formerly employed there were later employed 8 women and 2 men. In this latter case the average output was increased.

The employment of women in such large numbers has been productive of other results than the increase in the number of employees. Employers have found it expedient to modify their working apparatus so as to limit the physical effort required to the strength of their employees. The workers have been spared every operation that could be performed by machines so that transportation of work and lifting and distribution of raw materials are now done by automatically operated machinery, while in foundries new machines have been installed for core making, closing molds, metal trimming or cutting, sealing bottles, etc. In many shops monorails, traveling ways, and simplified methods have been adopted, as well as special working methods and special machines for the manufacture of articles made in a series of operations.

The matter of shop hygiene has been influenced by the presence of women, since they are more exacting in these matters than men. Their demands for better working conditions have been met by the installation of dressing rooms, wash rooms, and toilets. Women manifested a desire to introduce measures of economy, and as a result factory canteens, restaurants, and cooperative stores were established. Their employment called for medical and surgical services and for the establishment of special departments—nursing rooms for the use of mothers and infants' nurseries where children could be cared for while their mothers were at work.

Reemployment of Women After the War.

THE stopping of munitions work following the armistice materially affected the woman workers of the country. It became necessary to discharge large numbers of them, without, however, provoking an unemployment crisis, and it was necessary, therefore, to institute measures for aiding them and securing other employment for them.

As early as November 13, 1918, the minister of munitions issued a circular, partaking somewhat of the nature of a proclamation, to his working forces, in which he said: "There should be no unemployment; the interests of the country demand that all resume as quickly as possible their prewar work. All women who leave the munitions factories before December 5 will receive one month's pay and free transportation to the place chosen for their future residence." This circular was not as effective as was anticipated and the date of separation was advanced. There was much hesitation in resigning from the service through fear of difficulty in securing a new employment. Soon after another circular pointed out the necessity of women looking for work in other occupations, and advised that in order to prevent a period of unemployment the workday in munitions factories should be reduced to five hours in order to permit reapprenticeship in or effort to secure other employment. A slight reduction in wages was ordered for the purpose of impelling the workers to seek other work.

A census of workers in the war establishments was taken for the purpose of determining the former occupations of the employees. The labor exchange was to undertake the classification of those who were to be discharged. This inquiry, which promised excellent results, met with no great success. Many of the employees were found to be not thoroughly qualified to resume their former occupations, since they had either lost their skill in their former occupations during the four years of service, or, according to their own statements, had never been qualified and had been let out because of industrial incompetency.

In the agricultural districts classification was more easily effected, and when on December 13 the women working in the powder works, generally located in the country districts, were discharged but little difficulty was encountered. In order to facilitate the movement an indemnity of 140 francs ($27.02, par) was awarded to all persons over 18 years of age who had been in the service one month prior to the armistice and who left before March 1, 1919. This date was later extended to May 1, 1919. The State agreed to assume the payment of a portion of this indemnity. Difficulties in applying this regulation arose which were settled by a special arbitration commission.

In the Government offices, particularly in the war ministry, the services of many of the woman employees were unnecessary after the armistice. These were paid indemnities as follows: One month's wages to those who had been in the service at least six months before November 11, 1918; 15 days' wages to those who had been employed for a shorter period, and to those who had been in the service over six months a supplemental indemnity of two days' pay for each three months of service more than six. As a matter of fact there have been but few discharged from public offices.

At various dates the minister of labor or the minister of the interior has solicited private employers and public officials to endeavor to secure new employees through the departmental labor exchanges. The activity of these exchanges has increased, and their biweekly reports usually show an increasing number of placements for each successive period. It is difficult to form any idea of the movement for absorbing the discharged women in industries, or the manner in which these discharged persons have been absorbed. The situation varies according to the industrial character of the different districts. In some sections there is an increasing demand for workers in clothing trades, in others in cardboard making, and in others for domestic help, while in other localities industry is at a standstill and skilled women are without employment. Frequently women look with disdain upon appeals to accept the employment offered them. Their habits of work have been subject to great changes, and those who have been employed as substitutes for male workers prefer to remain in such employment. One labor exchange reports that "men returning from the war look with contempt upon their former work and demand positions requiring less physical effort, while the women are inclined to seek work requiring physical strength."

However, women are gradually returning to their former trades, but under conditions which are causing changes in the old economic and social régime. Leaving well-organized shops, they demand equivalent conditions in their new places of employment, and insist on better hygienic provisions and improved working appliances. Accustomed to standard wages in the war establishments they have been obliged to accept, during the transitional period and in order to escape unemployment, positions less remunerative than were those they left, but the time has come when they are demanding a wage corresponding to their abilities, their efforts, and their necessities. This has been demonstrated in the recent strikes in the clothing, food-preparation, and chemical trades.

It has become necessary to make renewed efforts to organize the female-labor market. In order to do this successfully the labor exchange must be enlarged, increased, and "professionalized," an effort must be made to provide training facilities adapted to women's requirements, and the trades must be organized to secure fair wages to the workers.

INDUSTRIAL HAZARDS.

Health Hazards in the Millinery Industry in New York City.

THE New York City department of health in its Monthly Bulletin for April, 1920, gives a brief review of conditions affecting health in the millinery industry. It seems that there are so many different industries contributing to the millinery business that it is quite difficult to estimate definitely the industrial hazards peculiar to the trade as a whole, but a few are pointed out, notably those arising from the use of certain poisonous materials employed in dyeing, cleaning, etc. The following materials and activities enter into the manufacture of millinery: Artificial flowers, velvets, frame making (buckram, straw, wire), feathers (treating, finishing, and dyeing), dyeing, assembling, and selling. The ribbon and silk industries are not included, as there are but few of these factories in New York City.

The report states that the making of artificial flowers probably carries the greatest menace to health, as will be appreciated when it is suggested that the materials used include Brazil wood, madder lake, salt of tartar, various alkalies, alum, starch, arsenic (Scheele's green), blue stone, chrome yellow, annotto, carmine, garancine, salt of potash, various strong acids, flour, indigo, Prussian blue, wood alcohol, gamboge, lead (white most frequently), zinc oxide. Chief among these are the hazards presented by wood alcohol, arsenic, and white lead. It is suggested, however, that arsenic has to a large extent been supplanted by anilin dyes, while zinc oxide powder has to a certain extent been substituted for white lead. A distinct menace is found in the use of wood alcohol, which is used extensively as a solvent for various colored pigments, because of the fact that it is rarely labeled as such, its label often containing a trade name which disguises its nature, so that workers are ignorant of what they are using and fail to take the necessary precautions. Gas is extensively used in several processes, principally in dyeing, and this presents a fire hazard as well as a hazard to health because of fumes.

Perhaps one of the greatest menaces to the health of individual workers, according to this report, is the irregularity of hours of employment, many of the women who make artificial flowers performing their full day's work and then taking work home to be done by themselves. This home work is intended to be done by other members of the family, it is claimed, but "proof of this is practically impossible." A considerable amount of home work, it is believed, is done by small children. "There is serious need for some method," declares the report in this connection, "by which the hours of women and girls working at home could be definitely ascertained and the law prohibiting night work adequately enforced in this industry."

It is difficult to see how this is possible, as long as factory workers are permitted to work in establishments and then, in addition, are permitted by employers to take work to their homes, under the flimsy pretext that it is being done by others of the employee's family, when it is known by both employer and employee that such is not a fact. It is therefore suggested that those working in licensed tenements be made to procure their materials from firms who do no manufacturing on their premises, and that firms which do manufacture be prohibited from permitting full-time employees from taking work home on any pretext, or that the pay roll record be made to include time performed under both factory and home conditions.

This suggests another aspect to which attention is drawn, and that is the employment of children. Certain stages in the manufacture of artificial flowers are sufficiently simple as to be possible of performance by the very youngest children, and this is the character of the work usually taken home. Under the circumstances it is admitted that enforcement of the child-labor law is difficult. The report suggests that in families in which there are many young children such home work should be under constant supervision, especially after school hours and in the early evenings, and that reports of work assigned to be done at home be made by manufacturers to the division of industrial hygiene of the city department of health, and, further, that inspectors be assigned to supervise this home work, particularly during the rush season, to prevent the employment of very small children, and especially of school children, in factory work.

In the manufacture of velvet the hazard to the worker arises from the use of sharp knives with which the roving waste is stripped from the bobbins and in the process of dyeing. The presence of floating particles, of steam, and the haziness of the atmosphere which causes difficulty of observation, and a large amount of aqueous condensation when there is so much heat and moisture, and the use of acids and alkalies in watery solutions, in the presence of conditions particularly suitable for irritating the skin and other sensitive organs, are the chief disadvantages. The presence of water, causing slippery floors, and the lack of proper ventilation are other hazards noted. Myositis is said to be common, the employee who has been in this form of work for any length of time frequently showing deposits similar to those observed in rheumatoid arthritis.

In the manufacutre of wire hat frames, which is done mostly by men, the hazards present were found to be not so much in the industry itself, although the machinery seemed to be inadequately guarded, but in the uncleanliness of the shop environment. The men seemed quite indifferent to the lack of proper ventilation and the disorderliness of the shop.

Another branch of the millinery industry presenting health hazards to the workers is the treating of feathers and the making of feather ornaments—work which is dirty, dusty, and insanitary. It is admittedly difficult to remove all health hazards because of the nature of the work," but when, as in this city, a great proportion of the work is performed in ancient, converted houses, mostly old tenements, unsuited for any manufacturing purposes, this labor actually becomes a very hazardous occupation."

Toilets were found to be inadequate, heating and lighting poor, and washing facilities often negligible. The report states that often lunches were eaten by operatives amid the dust and dirt of their work and often without the formality of washing their hands.

A brief description of the classification of feathers and methods of handling is included in the report.

Attention is called to the fact that some manufacturers use individual chemicals which, if properly used, and in suitable shop conditions, present no special hazard, but in the instances encountered, these mean special hazards to the workers, who are usually unaware of the dangers to which they are exposed.

Benzine, benzol, turpentine, wood alcohol, analin, essential oils, petroleum, and similar chemicals are quite often found masquerading in the millinery industry under trade names or disguised under factory cognomens, entirely unfamiliar and unknown to all but the individual responsible for the new nomenclature.

The use of some of these chemicals in the manufacturing of millinery and the well-known effects upon the health of workers are described briefly. Particular mention is made of the use of dyeing mixtures, and the danger from anilin poisoning, etc.

Aside from the hazards encountered by the use of chemicals, machinery, etc., the report lays some emphasis upon insanitary conditions under which the operatives are very frequently forced to work, and notes the indifference of many of them to this unhealthful environment. In most of the modern millinery establishments up-to-date plumbing fixtures have been given careful attention, "but it is regrettable to have to state that toilets are not carefully used by workers." There also appears to be a very trying indifference on the part of the majority of workers concerning the necessity of using individual drinking utensils and individual towels. Where these are provided by the management the result is disappointing.

Since the health of the workers themselves is so intimately concerned in these matters, it should be taken up carefully by the organizations concerned in labor's welfare, and an intensive educational campaign waged to impress upon them the importance of observing sanitary precautions, if they are to remain well, since only through intelligent cooperation and consistent compliance can improvement in working conditions be attained.

Poisons in the Tar Products Industry.

IN 1917 (the latest date for which the statistics are available) 190 manufacturing firms were reported to the United States Tariff Commission as engaged in the production of coal-tar derivatives. One hundred and seventy-eight of these plants are listed alphabetically by name and office address in a bulletin published by the commission entitled "Census of dyes and coal-tar chemicals." The 12 remaining companies withheld their consent to the publication of their names.

According to this bulletin "at least 125 different chemical substances have been isolated from coal tar." Though a mere by-product in the manufacture of coke and of illuminating gas, coal tar is itself the raw material from which other important manufacturing substances are obtained by fractional distillation, as, for example, benzol, toluol, naphthalin, anthracene, the phenols, etc. From coal tar are derived various dyes and chemicals, medicinal preparations and flavoring extracts, synthetic tanning materials, colors, and explosives.

Cutaneous affections result from direct contact with the tar. They develop also from exposure to tar fumes which are irritating to the

skin, and, when inhaled to the whole respiratory tract, and these effects can not be entirely obviated by good ventilation. Toxic absorption is probably more often due to the action of the fumes than to direct contact with the solid tar. Otherwise the symptoms of irritation would be more frequently seen on the hands and arms, since these parts of the body are subject to the direct action of the tar. As a matter of fact, however, facial inflammations predominate.

It can not be assumed, however, that the so-called coal-tar dermatitis is always provoked solely by the tar products themselves. It is due in part to the solvents used for some of them.

One such solvent is benzol, a member of the aromatic series of hydrocarbons and nearly related to the phenols (cresol, carbolic acid, etc.). It serves as a solvent for tar and tar colors. Its vapor when inhaled causes severe poisoning, manifesting itself by vertigo, and by a condition simulating inebriation accompanied by tremors, loss of consciousness, and convulsions.

Dr. Beisels-Tutzing describes a typical case of benzol vapor poisoning in No. 42 of the Munich Medicinische Wochenschrift, 1912. A wealthy master brewer descended through a manhole into the interior of a vat to paint the inside of it with a 10 per cent solution of tar in benzol, as a protective and preservative. Notwithstanding the fact that there were openings in the cover of the vat for the access of air, the man collapsed, and about five minutes later he was drawn out in an insensible condition. The warm outer air had prevented the escape of the poisonous gases. In the open air he quickly recovered consciousness. Aside from the symptoms above mentioned, the victim's memory was indistinct concerning events immediately preceding the accident. The symptoms of illness disappeared in the course of the day, but for a whole week the color of the skin remained noticeably pale.

Chronic poisonings by benzol vapor are relatively rare in the recovery of coal tar, because the employees work in the open air or in well-ventilated rooms. The precise nature of the changes wrought by the vapor in the blood of benzol workers has not yet been fully determined; but its injurious effects are unquestionable.

In the manufacture of tar there remains, after the abstraction of the oils, a residuum which contains phenols, pyridin bases, cresols, etc., and this residuum is hurtful to the eyes on account of the corrosive action of the ingredients. The result of such irritation is conjunctivitis, followed by corneal inflammation and ulceration. Sometimes the cornea in the space between the eyelids looks as if it had been tattooed. Wartlike growths are produced by the dust arising from this composite paste. These drop off, leaving small ulcers instead.

The ultimate residue of the dry paste, which consists of nothing but pitch, is practically harmless to eyes and skin. But even coal-tar pitch may, under special conditions, occasion morbid symptoms, and these symptoms are closely related to the effect of light on certain dyes. This is called the photodynamic effect, and it is worthy of note that photography itself is possible only because of the action of light on readily decomposable chemical substances.

Results of Studies by Lewin, of Berlin.

LEWIN, of Berlin, has published the results of important studies on this subject in No. 28 of the Munich Medicinische Wochenschrift. The following excerpt from his report is of value:

Certain fluorescent dyes are capable of injuring, and even of destroying, monocellular organisms in the light, though in the dark they are inert. In like manner the cells of higher organisms are damaged by such dyes. Fluorescent acridine acidulated with hydrochloric acid, for example, kills infusoria in diffused daylight though a million times diluted. Fishes which were kept in a solution of eosin, one part to ten thousand, or Bengal rose, one part to thirty thousand, in shallow glass vessels exposed to daylight, after a few hours showed necrosis of the outer row of cells, especially in the fins. The cells were extruded, hanging down in the form of tattered shreds. In 36 hours the fishes died, while controls kept in darkness remained alive for a long time. In mice and rabbits, inoculated with eosin, ulcers were observed to develop in the light of day on the ears, while the hair on the head and back fell out, and doughy tumors appeared on the affected parts. In epileptics, to whom eosin was given in large doses as a remedy, doughlike swellings appeared on the face and hands, with ulceration and loss of the nails; but these phenomena were present only on the uncovered parts of the body.

These phenomena unmistakably are due to the action of light. Among electrical workers in a Berlin establishment such symptoms are regarded as photodynamic. It is significant that laborers handling coal-tar pitch complained of discomfort only in rare instances until other substances were incorporated with the tarry mass. Complaints began with the manufacture of paper tubing when these other ingredients were employed to form an admixture suitable for the new product. Then men and women began to suffer from burning and itching sensations of the skin on the face, neck, hands, and forearms, at times very severely.

Yet visible alterations of the skin were slight. They consisted chiefly of a general diffused redness. In some cases hard nodules on a red base were found, generally on the neck. In some patients the cuticle was loosened in large, ragged patches. Others had only discrete spots of reddened skin. It was remarkable that, without exception, the complaints concerning irritation of the skin referred to parts accessible to light. Still more striking was the fact that, with many patients, the itching ceased at night or when in the shade. This surely indicates that the irritation is caused by photodynamic action.

On analyzing the clinical histories of 103 patients (53 men and 50 women) Lewin found that 88, or 85.4 per cent, had the itching sensation whenever light, especially sunlight, fell on the affected parts of the body, and only 15 suffered both in the light and in the shade. He further testifies that, of those afflicted with the itching, 89, or 86.4 per cent, were light haired, or blonds, and only 14 were dark haired. The blonds, therefore, were apparently more susceptible to the injurious effects. In 91 cases the face was primarily affected, and the hands and arms secondarily.

The photodynamic symptoms above described are of course annoying in and of themselves, and to some extent incapacitating, but they are not significant of immediate danger. More serious are the tumors which frequently occur in workmen who have to do with anilin dyes. These tumors develop most commonly in the urinary bladder, not only of workmen engaged in the manufacture of anilin dyes, but of the dyers of textiles who merely make use of

these colors. According to Leuenberger, of Basle, who has observed 59 tumors of this kind, various substances of the aromatic series possess tumor-forming potency; namely, anilin, toluidin, naphthylamin, etc.

But since the action of this and of other chemical substances does not for long periods of time cause tumors in all persons employed in handling them, it is evident that an idiosyncrasy, or special susceptibility, exists in the individuals affected. In any case, workers in such dyes should consult a physician as soon as possible at the first signs of vesical disturbance.

As to treatment of the dermatitis, inunctions with fats and washing with very dilute solutions of medicated soap have proved useful. These applications promptly relieve the irritation; but washing with water is said to aggravate the trouble.

Industrial Poisoning in German War Industries.

THE German factory inspection report for the four years of the war,[1] mention of which was made in the July issue of the MONTHLY LABOR REVIEW (pp. 116–128), contains much data of interest on the subject of occupational diseases and industrial poisons, giving particularly the experience of German manufacturers with certain new poisons used in the munitions industry. The results are not summarized, and it is impossible to compute from the data given accurate totals of cases of sickness and death from the various substances, as the different inspectors do not pursue the same method of making their reports. While one will give all the cases of a certain kind of poisoning, fatal and nonfatal, but omit to say how many were exposed to the danger, another will tell the number of employees exposed and the deaths, but say nothing of the milder forms. It is evident also, from some of the statements therein, that the reports were not edited by a physician and need correction by someone with medical training.

These particular volumes are interesting beyond the ordinary because they give a picture of German industry during those years when information from that country was cut off and when industry was being carried on under the stress not only of the war but of the blockade. The effect of the latter is seen on almost every page—in the lack of raw materials for soap, overalls, aprons, and respirators, in the difficulty of getting enough food for workers in heavy occupations and working long hours, and in the forced substitution of unfamiliar chemicals for well-known ones which were no longer available. The account of the war industries, especially the manufacture and loading of explosives, is of special interest to the student of industrial poisons, as it presents an experience different in many ways from that of Great Britain, France, and the United States. It is only with this part of the report that this review deals—the effect of the various poisons used in war industries, including those which had to be introduced into ordinary industry because of the lack of more harmless substances shut out by the blockade.

[1] Jahresberichte der Gewerbe-Aufsichtsbeamten und Bergbehörden für die Jahre 1914–1918. Berlin, 1919 and 1920.

Conditions Favoring Occupational Diseases.

INDUSTRIAL poisoning is influenced by many general factors—by factory construction and management, by long hours, by immaturity or physical unfitness of the workers, and so on. The German reports dealing with these subjects sound very familiar to an American. The inspectors lament the hasty construction of the war plants, the impossibility of getting proper washing facilities installed, the difficulty of making the military mind see the importance of anything but immediate production, the enormous labor turnover, and the necessity of substituting women and the physically unfit for strong men. Naturally they, much more than Americans, deplore the employment of women at night, for Germany, along with other European nations, abolished such employment at the time of the Bern Convention in 1904, while it is still retained in many States.

The features of war industry which increased the incidence of occupational poisoning may be summarized as follows: Changes in the working force, progressively increasing as the war went on, strong men being replaced by women, young persons, old men, men unfit for military service, criminals and prisoners of war; increased hours, night work for women and young persons; poor food, poorer each year; lack of soap and of material for clothing—aprons, gloves, shoes. One of the tables given shows the increase of sickness and death in a large iron works caused by these war-time conditions, as follows:

	1914.	1918.
Deaths per 1,000 workers	6.0	12.2
Sickness, incapacitating, per 1,000 workers	25.8	35.5
Sickness, not incapacitating, per 1,000 workers	1,394.0	1,811.0

The substitution of women for strong men in heavy work led to much illness. In a plant in the Arnsberg region, where 10.4 cm. shells were made, no less than 33 per cent of the women were sick, with "swelling of the liver," "swelling of the bladder," pains in the back and in the stomach, and cramps of muscles. Work requiring them to stoop a great deal gave the most trouble. Later on this plant began to make 15 cm. shells, and then sickness increased and the weaker women had to be weeded out and eventually mechanical means for handling the shells introduced. Women seemed to be more ruthless with themselves than men, and for the sake of overtime pay would often work excessively long hours even when they were ill. The Düsseldorf inspector speaks of pelvic disorders in the women workers, and general abdominal ptosis, caused not only by the lifting of heavy weights but also by the disappearance of abdominal fat. Hernias developed and heart strain sometimes brought about irreparable injury. The women had not only long hours in the factory but their own housework to do, and night workers were unable to get enough sleep by day.

In one textile mill in the Breslau region the cases of sickness among the women increased from 30.9 per cent in 1913 to 88.6 per cent in 1918. The increase was in respiratory diseases, nervous weakness, general exhaustion, attacks of fainting, anemia, and gastrointestinal diseases. Influenza and lack of food broke down the resistance to disease. These factors were also seen in the sickness rate for men, who as the war went on were recruited more and more from among

the old and the physically handicapped. In this same textile mill the sickness rate for men rose from 19.1 per cent in 1913 to 39.3 per cent in 1918. In machine shops men had often to work 14 to 16 hours out of the 24, and this on insufficient food. The winter of 1917–18, with its terrible food shortage, made great inroads on the endurance of both men and women, and in many large factories an increasing weakness became evident, so that sometimes men would sink down from exhaustion at their work. Then came the great epidemic of grippe in 1918, which cut down the depleted people. In the fall of that year some factories were almost empty of workers.

War prisoners, Russian and Polish, are mentioned as being employed in the zinc and lead smelters, and are said not to have suffered much from lead poisoning because of continual shifting, but they showed little resistance to the influenza and many died in the epidemic. Altogether three epidemics of influenza are mentioned. and also a severe epidemic of dysentery, which occurred in 1917. One interesting observation with regard to the influenza is made: The workers in arsenic smelting practically escaped it, while men employed in a neighboring ammonium nitrate plant suffered severely. In the same way the gas and coal tar plants in Döbeln were free from influenza, while 30 to 40 per cent of the factory hands had it.

Of the common industrial poisons lead almost ceased to give any trouble. There was no raw material for the white lead plants and so they closed down, one of them, in the Düsseldorf region, utilizing the chance to install alterations which would eliminate hand work and make handling of the lead from the time it is first hung in the corroding chamber till it leaves the factory entirely mechanical. Lead paint, of course, was no longer made, and the potteries were practically closed down. Anthrax was lessened because of the lack of foreign hides. On the other hand arsenical poisoning increased decidedly. In the plant mentioned above the cases increased from 7 cases out of 107 employed in 1913 to 111 out of 137 employed in 1917. This increase was due to shifting labor, unskilled and uninstructed, many of them war prisoners, to lack of proper protective working clothes and underwear, to the necessity for increased production, and to the impossibility of replacing dust collecting apparatus when it got out of order.

New Industrial Poisons.

THE new poisons, introduced as substitutes (*Ersatzmittel*), gave rise to much trouble. Germany has no petroleum and the lack of machine oils and lubricating compounds of all kinds made itself keenly felt. All sorts of substitutes were introduced, the composition of which was not known to the buyer, but most of them seem to have contained high boiling coal-tar oils and pitch with creosotes. These oils were very irritating to the skin and every district reports more or less trouble from this source; indeed, one gains the impression that dermatitis and ulceration from machine-oil substitutes was the greatest single cause of trade sickness during the war. In one plant using an oil with creosote in it, 200 cases of dermatitis occurred and 50 of them lasted long enough to be classed as occupational accidents. The evil was increased by lack of impervious material for gloves and aprons, for the clothing would get saturated with oil and the erup-

tion spread all over the body. Ulcers would form and cause weeks of disability, with feverishness and general malaise. The best preventive, neutral soap, was lacking in great measure, although an effort was made to provide it in such cases. Nor were bland ointments available; vaseline was almost impossible to procure.

The soap used was not only insufficient but irritating to both makers and users. Laundry workers suffered from the caustic effect of the soap powders, and when that happened there was nothing to do but to discharge them, for means of protection were not forthcoming. In the soap factories there was much inflammation of eyes, never seen in peace time. The officially approved formula for soap powder was as follows: Fatty acids, 4.5 per cent; soda, 30 per cent; sulphate, 5 to 10 per cent; water glass, 10 to 15 per cent; kaolin, 0.5 to 1 per cent. The soda was chiefly responsible for the trouble, and it was impossible wholly to protect the women's eyes from it.

Turpentine seems to have been before the war a more important constituent of paint than it has been of late years in the United States. The war cut off all of the supply and benzol (benzene) was used instead, with resulting disastrous effects on the painters, as noted in several reports. In the Stettin region small torpedo boats were made and the men who painted the tiny spaces suffered much from benzol fumes even when fresh air was driven in. It was found to be unsafe to employ them for more than one-half hour at a time during summer weather.

Linseed oil was also replaced by coal-tar oils, and itching eruptions, together with impairment of vision, fogginess, and dimness, are mentioned as following the use of such paints. To impregnate railway ties and telegraph poles naphthalene and anthracene were used, and the men handling them, especially those carrying the poles on their shoulders, suffered from ulcerations where the coal-tar residues soaked through to the skin. For varnish, not only benzol but solvent naphtha—a mixture of toluol and xylol—was used, and sometimes the very poisonous dichlorbenzol. In one factory using paint of this kind 12 workers fell sick one day, 4 the next day, and 3 the third day. The women seemed as if drunk, became irrational, and fell to the floor with convulsive twitchings. They recovered, however, in a few days. The trouble seems to have been attributed to solvent naphtha with a high acetone content.

Carbon disulphide in varnish caused some women to become mentally deranged, three of whom had to be sent to an asylum, but the physician in charge seems to have concluded that there was too little carbon disulphide present and that the trouble was imaginary. However, the statement is made that in another region varnish or lacquer sometimes contained as much as 85 per cent of carbon disulphide (CS_2), and the remaining 15 per cent was composed of nitrobenzol. The use of this varnish gave rise to much poisoning. The lack of benzene to clean metallic surfaces led to the use of trichlorethylene, the fumes of which caused nausea and mental confusion, so that susceptible workers had to give it up. They then tried to use 50 per cent tetrachlorethane, but were obliged to desist because the cases of poisoning in airplane works in 1914 had made the Government forbid its use. Wood alcohol was often substituted for grain alcohol.

A substance new in industry, perchlornaphthalin, was used to impregnate fabric for gas masks. It proved, contrary to the verdict of the scientists who had tested it, to be very poisonous, causing skin lesions like those of chloracne, confluent ulcers, and also weakness in the legs; uncertain gait. Not only contact, but the fumes would cause these skin lesions and even daily baths and semiweekly medical examination did not serve to control it. In one plant employing 90 persons there were 50 cases in a space of nine months, and later on the condition became even worse. Finally it was found that the use of artificial sunlight (*kunstliche Höhensonnenstrahlapparat*) cured the ulcers after a few applications. In another region an excellent exhaust apparatus carried off the fumes and protected the workers, but unfortunately spread them over the countryside so that the cattle fell sick and died or had to be slaughtered. The factory had to be moved to a site where no such harm could be done.

Munition Poisons.

GERMANY'S experience with munition poisons was quite different from that of France on the one hand and of the United States and Great Britain on the other. In France the favorite explosive was a mixture of picric acid, trinitrophenol, and dinitrophenol, and it was the latter which gave rise to almost all the serious poisoning in French explosive works. The French did use trinitrotoluene, but with almost no trouble—indeed, they insist that TNT is fairly harmless if pure—and they had not one death attributable to it. In Great Britain and in the United States TNT, usually mixed with 50 per cent or 80 per cent of ammonium nitrate, was the high explosive used for shell and in both countries it was the cause of a great deal of poisoning among the shell loaders. British TNT manufacturing plants were free from poisoning, but in the United States such plants were almost as bad as the loading plants. Nor did the British and Americans find pure TNT harmless; quite the contrary.

Experience With Dinitrobenzene.

In Germany TNT was used at the outset, with 40 per cent ammonium nitrate, at first in powder form, pressed into shell, then molten and poured. Apparently not enough could be obtained, for at the end of 1916 they began to manufacture and load dinitrobenzene and shortly after, picric acid and trinitroanisol, but the former seems to have been used only for the booster charge, the detonator. Dinitrobenzene is so much more poisonous than TNT that most of the German reports deal with it, and when the numbers of cases of sickness caused by DNB in the different districts are added together the result is striking, although the fatalities are not very numerous in proportion to the numbers employed. It is stated, however, that only extraordinary precautions kept this number down.

The Germans do not consider picric acid particularly troublesome, but dinitrophenol caused some poisoning. Trinitroanisol, which the French pronounced more toxic than any other substance used, except dinitrophenol, was also in Germany the source of much industrial sickness and disability. It was never used in either England or the United States. On the other hand, the poison which gave rise to

more sickness and death than any other in the United States, nitrogen oxide fumes, generated in the manufacture of guncotton and picric acid, and which was also a serious danger in English explosive manufacture, is only mentioned two or three times in the German reports. Nor did the French have much trouble with nitrous fumes. Tetranitromethylanilin, or tetryl, which caused so much dermatitis in British and American detonator loading, was not used at all in Germany.

The change from ordinary manufacture to munition work resulted in a decided rise in the sickness and death rate. For instance, the following is the record for a Düsseldorf textile plant which began toward the end of 1916 to make munitions.

SICKNESS AND DEATH RATES IN A DÜSSELDORF TEXTILE PLANT, 1916 TO 1918.

Year.	Sickness rate per employee.	Days of sickness per employee.	Deaths per 1,000 employees.
1916	0.49	8.6	2.9
1917	.75	12.6	5.0
1918	1.19	17.9	8.4

A contrast is drawn between the people employed in the metal trades (4,320 men and 2,500 women) and those handling explosives (340 men and 620 women) during the year 1917.

SICKNESS RATES PER 100 EMPLOYEES IN THE METAL TRADES AND THE MANUFACTURE OF EXPLOSIVES IN 1917.

Item.	Metal trades.		Explosives.	
	Men.	Women.	Men.	Women.
Skin diseases	3.0	4.1	7.1	10.5
Respiratory diseases	5.5	8.6	16.5	18.7
Digestive	6.8	16.2	20.3	46.1
Blood and blood vessels	3.0	20.3	4.1	27.4

The danger with DNB is from fumes, but far more from contact. In Bavaria from 1915 to the end of the war there were fully 1,000 cases of DNB poisoning, and many of the victims had from two to five attacks. There were, however, only 12 deaths. In one factory the cases of poisoning reported averaged (calculated on the basis of the average pay roll) in November, 1917, 13.3, and in August 69.7. This plant had been built down in a sandy, windless hollow.

The districts reporting cases of DNB poisoning are Potsdam, Bavaria, Düsseldorf, Wiesbaden, Oberpfalz, Oberfranken, Ludwigshafen. In Düsseldorf there were 81 deaths—71 men and 10 women. In four regions, excluding Düsseldorf, there were altogether 1,923 cases of poisoning and 22 deaths. Adding the Düsseldorf figure of 81 and also 6 from Wiesbaden and 4 from Breslau, there seems to have been altogether 113 deaths from DNB. Whether the Düsseldorf region had more of such work than all the others put together or had much worse conditions is not stated, and no explanation is given for these 81 deaths. The proportion of cases of DNB

poisoning among women was greater than that among men, in 1916 it being 66 per cent as against 56.7 per cent, and in 1918 it being 119 per cent as against 100.5 per cent. One of the Wiesbaden plants had to close down because of "anilismus" (cyanosis, headache, dizziness, faintness, etc.) among its force. The inspectors state that, in contrast to the other explosive poisons, practically everyone seems to be susceptible to DNB.

The symptoms of poisoning are general malaise, sense of weariness, loss of appetite, itching, roaring in the ears, dizziness, fainting, palpitation of the heart, and sleeplessness. Then the lips become blue, with marked pallor of the face; there is sweating, vomiting, cramps, swelling of the legs, difficult urination, and, in women, paralytic symptoms. No description is given of the fatal form.

Experience With TNT.

With TNT, Koelsch, the chief inspector for Bavaria, had a favorable experience, the cases in the Bavarian factories being few and light—cyanosis, headache, nausea. One death occurred, a little girl of 14 years, with organic heart disease, who was cyanosed after two days' work and died shortly after—a shocking instance of the way all rules as to the employment of the young and the handicapped were thrown overboard during the war. To tetranitromethane Koelsch attributes three severe cases of lung edema in men, with one death. There was no case of toxic jaundice in the Bavarian TNT loading plants. In Potsdam, however, TNT shell loading gave rise to much sickness, and in one plant in 1917 there were seven deaths within a short time from toxic jaundice. Inasmuch as conditions in this factory were good and no further deaths occurred after that, it is supposed that the TNT at that time was contaminated, probably with tetranitromethane. Up to the end of 1917 the Potsdam region had, in addition to these seven deaths, seven nonfatal cases of TNT poisoning, not toxic jaundice, but catarrh of the intestines, gastric hemorrhage, bronchitis, cardian neurosis, and anemia. In 1918 there were several more cases of this kind, but no toxic jaundice. The women suffered distinctly more than the men.

In Wiesbaden large quantities of TNT were made, but there was no sickness in connection with it. Loading shells caused mild symptoms in girls, distress in the stomach, headache and dizziness, and later on only men were allowed to do it. A girl died of TNT poisoning in the Magdeburg region, and it is said that the girls employed there in this work had respiratory troubles, were very pale, and looked older than they were. Five cases of toxic jaundice are reported, four of them fatal.

Nowhere is the number of cases, fatal and nonfatal, of TNT poisoning given. The statistics of sickness in one Potsdam plant show that 4 out of 340 women, or 1.2 per cent, and 9 out of 620 men, or 1.5 per cent, had toxic jaundice, but nothing else is given.

Experience With Other Poisons.

Trinitroanisol is apparently terribly irritating to the skin. Women and alcoholics are especially susceptible. Sometimes poisoning followed a few hours' exposure, the whole face being swollen, accompanied by burning and itching. Not all were susceptible, but in one

loading plant in the Rhineland 30 out of 40 women suffered from eruptions. Fulminate of mercury caused dermatitis and more or less inflammation of eyes, nose, and throat, but was not nearly so troublesome as trinitroanisol.

The only mention of nitrous fumes seems to be in the reports from Wiesbaden, where four nonfatal cases occurred, and from Nurnberg-Furth, where there were eight cases. The Draeger helmet is said to be an uncertain protection against these fumes. Picric acid was apparently manufactured without the enormous evolution of nitrous fumes which characterized its production in the United States. The only trouble in connection with picric acid took place in the loading of detonators, when a dermatitis, not serious, appeared, and, in three women, anemia and gastric disturbance. Trinitronaphthalene, when used in powder form, set up inflammation of eyes and mucous membranes, but these ceased after the stuff was granulated. Phosgene, accidentally spilled or leaking, caused eight deaths in two factories.

The Germans had learned before the war of the poisonousness of airplane dope made from cellulose acetate with tetrachlorethane as a solvent, and such dope was not allowed to be used, so that they escaped the very serious condition which obtained in the first years of the war in British airplane works, where this solvent was the cause of at least 70 cases of toxic jaundice and 12 deaths. The solvent used by the Germans seems to have contained ketones, chloroform, methyl alcohol, and formic ether. Curiously enough the inspectors attribute all the harm done by it to decomposition of the last substance with production of formic acid fumes. The inflammation of eyes and nose and the salivation they describe may well have been caused by the formic acid, but it is certainly probable that the chloroform and methyl alcohol played their part in producing headache, nausea, loss of appetite, dizziness and fainting attacks.

Efforts to Safeguard Employees.

The inspectors seem to have made valiant efforts to safeguard their charges against the effect of these new and unfamiliar poisons, but their difficulties increased as the war went on, even though the knowledge gained of the nature of the poisons was a help. But soap grew scantier and poorer, rubber gloves were unattainable, and even stuff for aprons was hard to get. The employes were more and more unfit to stand exposure to poisons, there were exhausted women, old and sick men, young girls and boys. Finally the food blockade, which was closer each year, and the terrible influenza epidemics combined to render the workers defenseless against attack from poisonous fumes and dust. Yet a great deal was done to help. The food ration was the largest that was allowed, and in addition many factory owners installed their own kitchens and lunch rooms. Milk was somehow procured and given free to workers in DNB, picric acid, and TNT plants. Because poisoning was so much increased in hot weather, Koelsch, in Bavaria, had the hours of work changed so as to avoid the hottest part of the day—from 10 in the morning to 4 in the afternoon—and to utilize the early and late coolness. In one plant during the rest periods milk was given and also regular

oxygen inhalations, which were considered of decided benefit. In a loading plant for DNB and trinitroanisol in the Rhineland, almost all the work was mechanical and the benches were provided not only with suction fans to carry off fumes and dust but with a stream of compressed air. In a plant in Bavaria the DNB was conveyed in closed pipes and discharged into closed receptacles, yet even here four deaths from poisoning are recorded. Although in most places the washing facilities, lunch rooms, etc., are said to have been insufficient, the famous plant of Friedrich Bayer and the Krupp works were complete in every detail.

A quite unexpected source of occupational poisoning proved to be the dehydration of vegetables which was done on an enormous scale, and in some places the heat was produced in coke ovens and carried with it carbon monoxide and sulphuretted hydrogen. In one such plant there was 11.1 per cent of sickness among the employees and in another, 20.5 per cent, while the average for the sick fund for that region was only 4 per cent. There was a difference of opinion as to the cause of this increased sickness rate, some physicians holding that it was not caused by carbon monoxide but by the chilling effect of leaving the dehydrating rooms for cold rooms. As precautions, however, proper fuel was ordered, careful firing, good ventilation, no youthful labor, and a night shift of only eight hours.

WORKMEN'S COMPENSATION.

"Loss of Use" or the Impairment of Function.

By MARTIN C. FRINCKE, JR.

ONE of the many problems which confront the commissions, boards, and courts administering the workmen's compensation laws is the question of compensation for injuries which do not result in the amputation or severance of any member or part of the body, but which, nevertheless, do cause a permanent or partial loss of the use of a member or the impairment of its function.

The State compensation laws generally provide compensation for any partial disability, either temporary or permanent, which an injury may cause. For temporary partial disability the injured workman usually receives a certain percentage (50 to 66⅔ per cent) of his wage loss during the term of the disability but limited to a certain fixed maximum period. The fact is also generally recognized that an employee may become permanently partially disabled by the loss of some member of his body without suffering a loss in his earning capacity, and a majority of the States have provided in their laws for a schedule of such injuries, awards being granted for certain fixed periods or amounts, to compensate the injured workman for the loss he has sustained. The general underlying theory of these schedules is the allowance of compensation to a workman who has suffered the loss of a member and a consequent impairment of the function of his body, but who, under the general provisions of the statute for partial disability, would not be entitled to compensation because his injury has not resulted in a loss of earning capacity.

Under the general theory of the laws as to partial disability compensation is dependent upon the loss of earning capacity. Thus in a decision by the Industrial Commission of Ohio [1] it was held that where a man injured the ligaments of his leg so that he was partially disabled the injury came under the general provisions of the act as to partial disability (sec. 26, Acts of 1911), and he was not entitled to compensation since he had been able to get another job at a better wage. Under the schedules of injuries, on the other hand, the basis for the allowance of compensation is the permanent loss of a member or function of the body. It is the handicap resulting from the deprivation of a member or its use that constitutes the reason for awarding the fixed compensation for the scheduled injuries. This theory has been contested in only a few of the compensation States, but where it has been put to an issue the majority of the rulings hold with the decision of the Supreme Court of New Jersey in the case of De Zeng Standard Co. *v.* Pressey,[2] where it was said:

> The prosecutor's principal claim is that there can not be a statutory "disability" when it appears that the earnings of the petitioner had not been impaired. With this we can not agree. It may well be that for a time an injured employee might be

[1] Burns *v.* Leonard C. & R. Co., Bulletin of the Industrial Commission of Ohio, vol. 1, No. 7, December, 1914, p. 5.
[2] 92 Atl. 278; Bulletin of the Bureau of Labor Statistics No. 169, p. 208.

able to earn the same wages as before the accident; but, as we read the act, the disability intended thereby is a disability due to the loss of a member, or part of a member, or of a function, rather than to mere loss of earning power.

This decision was made the basis by the same court for awarding compensation to a workman who had lost one of his testicles, but who, as the result of the loss, had not suffered any loss in his earning capacity. In this case [3] the court gave the following rather clear definition of the controlling principles in cases of this kind:

Whatever view medical experts may entertain * * * the indispensable fact remains that the injured defendant has suffered the loss of a portion of his anatomy which nature planted in the human organism, as a dual reservoir of complete efficiency equally with eyes, ears, and limbs.

In harmony with these considerations, it has been held that the sole criterion of a disability, partial in character and permanent in quality, under the statute, is not limited to the loss of earning power. (Burbage *v.* Lee, 87 N. J. L. 36, 93 Atl. 859.)

Other States that have expressly adopted this line of reasoning are Connecticut, Michigan, and Montana. In Connecticut it was said [4] that the word "loss" as applied to members of the body meant deprivation, and the purpose of the law was to compensate for the handicap of being without the lost member and not the impairment of earning power. In referring to the schedule of awards in the Michigan law, the industrial accident board of that State declared that: "The law is so framed because of the fact that throughout the remainder of his life he will be deprived of the fingers so lost." [5] It was declared by the Montana Industrial Accident Board in its first annual report [6] that the length of the period of disability is not a feature in determining the compensation due an injured employee for injuries of this character.

All the States do not agree, however, that an award under a schedule is to be made regardless of whether or not the injured workman has suffered a loss in his earning capacity. A few States hold that the scheduled awards represent the presumed or estimated loss of earning capacity, and that this presumption may be rebutted by showing that the injured workman is receiving the same or higher wages after his injury than before it. Thus, the Appellate Court of Indiana, in the case of Centlivre Beverage Co. *v.* Ross,[7] where the employee had suffered the enucleation of a testicle but had failed to prove any loss in his earning capacity, said:

We must keep in mind the fact that the act does not give compensation for loss of a member, such as the loss of a limb, but for the loss of earning capacity caused by the loss of a limb.

The Industrial Accident Commission of Maryland has taken the same stand as the Indiana court, and in a case [8] where a man had two of his fingers lacerated, which caused them to be disabled but did not result in any loss of earning capacity, it was held that:

No element of damages other than loss of earning power can enter into our consideration of claims for compensation under this act; and the claimant having suffered no loss of earning power, he sustained no disability for which he can be compensated.

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[3] Hercules Powder Co. *v.* Morris County Court (N. J.), 107 Atl. 433.
[4] Franko *v.* William Schollhorn Co. (Conn.), 104 Atl. 485.
[5] Bulletin of the Michigan Industrial Accident Board No. 3 (1913), p. 14; and Lordie *v.* Grand Rapids Show Case Co., Michigan Workmen's Compensation Cases, 1916, p. 17.
[6] First annual report of the Montana Industrial Accident Board, 1916, p. 249.
[7] 125 N. E. 220.
[8] Leonard *v.* Cambridge Mfg. Co., Maryland Workmen's Compensation Cases, vol. 1, 1916, p. 87.

Although there is a difference of opinion on this point, it may safely be said that the prevailing view seems to hold with the decision in the De Zeng case.[9] This is undoubtedly the most reasonable attitude, because the workmen's compensation laws cut off all common-law remedies for injuries to employees, and where an employee has sustained an actual loss or loss of use of a part of his anatomy he should be allowed damages or compensation for such loss.

The schedules of injuries constituting permanent partial disabilities as found in the workmen's compensation laws, as a general rule, contemplate the loss of a member by severance or amputation. Because of this fact the question has arisen whether it would be proper to award compensation under the schedule to an injured workman who, by reason of his injury, has sustained an impairment of the function of some member without in fact having had it severed from his body. Cases have arisen where an employee has suffered the loss of the use of a member which was equivalent to its loss by severance. In some of such cases the commissions or courts have decided that this was equivalent to an actual loss by severance, while in others a strict interpretation was placed upon the statute and compensation was denied.

The purpose of this article will be an attempt to show, by a careful survey of the laws and decisions of the various States, when compensation may be had under the different workmen's compensation statutes by an injured employee who has suffered the loss of use of a member of his body or the impairment of its function. An endeavor will also be made to outline the principles which have been laid down by the different administrative bodies in determining what injuries amount to an impairment of function or loss of use of a member.

Statutory Provisions.

IN a number of States the question of whether the loss of the use of a member shall be compensated for on the same basis as loss by amputation has been determined by legislative action. Thus it is found that specific provision is made in 27 States that have compensation laws for the treatment of cases involving the loss of use of a member or the impairment of its function on the same basis as cases coming under the schedules involving amputations. A review of the laws of the remaining 19 compensation jurisdictions shows that 4 have no schedules whatever for awarding compensation for permanent partial disability. These jurisdictions are Arizona, New Hampshire, Porto Rico, and the United States. The hardship to the employees by reason of the absence of such schedules in these laws is very great. Thus an employee of the United States may lose his leg or may permanently lose the use of it and receive no compensation for the loss, provided he is able to resume his duties or sustains no loss of earning capacity by reason of the injury. Twelve of the remaining States have schedules in their compensation laws but make no specific provision for the inclusion of cases involving the loss of use or the impairment of function under the schedule benefits for permanent partial disability. While in some of these States such

[9] De Zeng Standard Co. *v.* Pressey, 92 Atl. 278.

cases have been compensated under the compensation benefits found in the schedules it can be done only by a liberal judicial interpretation of the laws. In Nevada before the law was amended specifically to include under the scheduled benefits injuries resulting in the loss of use of a member, the industrial commission made a ruling [10] "that the complete loss of the functions of a thumb, finger, toe, hand, arm, foot, leg, or eye should be considered as the total loss of such member." Three other States make no specific provision for the inclusion of cases involving the loss of the use of a member under the permanent partial disability schedules, but do, however, include in the schedules cases which involve ankylosis or stiffness of the joints and contractures due to burns or scars. The effect of this inclusion is much narrower in scope, but has to a limited extent much the same effect as the more liberal statutes which specifically include cases involving the impairment of function.

The following table shows the various compensation jurisdictions grouped according to the provisions in their laws for granting permanent partial disability compensation to cases suffering only a "loss of use" or "impairment of function":

STATES HAVING COMPENSATION LAWS WHICH INCLUDE PROVISIONS FOR LOSS OF USE OR THE IMPAIRMENT OF THE FUNCTION OF A MEMBER.

Loss of use or function specifically provided for in schedules.	Ankylosis and contractures provided for in schedules.	Loss of use or function not specifically provided for in schedules.	Jurisdictions having no schedules.
Alabama.	Kentucky.	Alaska.	Arizona.
Colorado.	Ohio.	California.[1]	New Hampshire.
Connecticut.	Wyoming.	Idaho.	Porto Rico.
Delaware.		Iowa.	United States.
Hawaii.		Michigan.	
Illinois.		Missouri.	
Indiana.		Montana.	
Kansas.		North Dakota.[2]	
Louisiana.		Rhode Island.	
Maine.		Virginia.	
Maryland.		Washington.	
Massachusetts.		West Virginia.[3]	
Minnesota.			
Nebraska.			
Nevada.			
New Jersey.			
New Mexico.			
New York.			
Oklahoma.			
Oregon.			
Pennsylvania.			
South Dakota.			
Tennessee.			
Texas.			
Utah.			
Vermont.			
Wisconsin.			

[1] The law has tables of percentages based upon total disability, leaving it to the administrative commission to formulate schedules of injuries. It provides that the loss of the use of both hands shall constitute total disability, but says nothing as to permanent partial disability.

[2] The law has tables of percentages based upon total disability, leaving it to the administrative commission to formulate schedules of injuries.

[3] The law provides that the loss of the use of both hands shall constitute total disability, but says nothing as to permanent partial disability.

It is to be noted in connection with the 27 States that make provisions in their laws for the compensating of injuries resulting in loss of use on the same basis as the injuries listed in the schedules and resulting from losses by amputation, that the declarations contained

[10] Report of Nevada Industrial Commissions 1914, p. 23.

in the laws, as in other features of the workmen's compensation laws, are by no means uniform. The various laws may, however, be roughly thrown into two groups or classes. Fourteen States [11] make a blanket provision covering all injuries resulting in the loss of use of a member or the impairment of some bodily function. The provision of the Louisiana act,[12] which is typical of this group of laws, declares that "where the usefulness of a member or any physical function is seriously permanently impaired, the court * * * may allow such compensation as is reasonable in proportion to the compensation" allowed for specific injuries in the schedule. The second group, consisting of the laws of 13 States,[13] make provision for allowing compensation for loss of use by specifically naming the members for which compensation may be allowed on this basis. Thus 10 States specifically provide that compensation shall be awarded for the loss of the use only of an arm, a hand, a foot, or an eye. Other States include these members and add fingers, thumbs, toes, and phalanges; but the Massachusetts law, while including these minor members, fails to include arms, legs, or eyes. The effect of these specific enumerations is to eliminate all the members not so listed, and in this way to narrow the scope of the laws. The practical benefit to the workman is, however, by reason of liberal judicial interpretations, substantially as great as under the blanket or all-inclusive provisions mentioned above. Although in the table Ohio is classed with the States providing compensation for this class of injuries where they are caused by ankylosis, the law of that State also compensates for the loss of vision without requiring the enucleation of the eye. The California and West Virginia laws do not make any specific provision for compensating for the loss of use of individual members, but they do state that the "loss of the use" of both hands shall be equivalent to total disability.

The provisions of the laws of the three States (Kentucky, Ohio, and Wyoming) which allow compensation for members made useless by ankylosis or contractures extend only to the fingers, except that Ohio includes thumbs.

Interpretative Decisions.

AS pointed out above, therefore, compensation for the loss of the use of a member may be allowed an injured employee either under legislative enactment or by interpretative construction. In the majority of jurisdictions the former method prevails.

The lack of published opinions or authoritative rulings has made it impossible to find expressions on the part of all the States on this point. However, of the 12 States that make no provision in their laws for the loss of the use of a member, 5 have made rulings on this subject. In Iowa, Kentucky, Michigan, and Montana it has been held that, notwithstanding the fact no provision is found in the laws of these States for the awarding of compensation for "loss of use" according to the schedule, such awards could, nevertheless, under a

[11] Alabama, Colorado, Connecticut, Louisiana, Maine, Minnesota, Nebraska, New Jersey, New Mexico, Tennessee, Texas, Utah, Vermont, and Wisconsin.
[12] Act No. 20, Acts of 1914, as amended, sec. 8 (e).
[13] Delaware, Hawaii, Illinois, Indiana, Kansas, Maryland, Massachusetts, Nevada, New York, Oklahoma, Oregon, Pennsylvania, and South Dakota.

liberal construction of the statutes, be made.[14] The ground for this construction lies in the interpretation of the meaning of the word "loss," these States having held that a member is lost when it can no longer be used in a gainful occupation.

The reasoning underlying this construction is clearly outlined in a decision of the Montana Industrial Accident Board in the case of a printer who had his hand crushed in a printing press so that he was totally unable to use it in his occupation as printer. The board rendered the following decision:[15]

> While possibly the hand can not be literally described as completely or entirely paralyzed at the present time, because there is, as stated, some slight function in the third and fourth fingers, yet the function existing is not such as to entitle the injured member to consideration as a "useable hand," in the ordinary, normal, accepted use of the term, and judging by the medical testimony adduced, it is only a question of time until the paralysis will be complete.
>
> In the matter of earning a living, through the medium of manual labor, such as he was following at the time he received the injury, the hand is worthless and clearly falls within the meaning of the law, as expressed in section 16 (i) of the Montana act, containing the schedule of compensation for specified injuries, consisting of "for the loss of."
>
> The board reaches the question of whether or not the loss of the use of the hand of the claimant is entitled to consideration, calling for compensation, as provided for in the Montana workmen's compensation act, regardless of what wages he may now be earning as a "messenger boy." The accident resulted in the total incapacity of the claimant to continue the work or occupation that he was engaged in at the time of the injury and has so circumscribed his usefulness as to limit his field of future endeavor to that of the "messenger boy," and kindred callings, which is a rather severe sentence to impose on a 20-year old boy.
>
> It is evident, from the opinion of numerous authorities on this question, as well as the decisions of the courts that have been referred to, that the meaning of the language of section 16 (i) in the words "for the loss of" should be accepted in its ordinary, logical, and reasonable meaning, which would unquestionably be "for the loss of the use of" whatever member might be affected or injured to such an extent that the injured person can make no further practical use of same. Such a condition would mean or constitute the loss of said member and call for the payment of compensation accordingly.

The Supreme Court of Rhode Island has held[16] that an impairment of the vision of an eye which leaves only 10 per cent of the vision remaining and renders the eye absolutely useless in any vocational pursuit whatever, is not "the entire and irrecoverable loss of the sight of either eye," so as to entitle the injured workman to the additional compensation allowed under the schedules of specific injuries. In this case, in reply to the employee's contention that, inasmuch as he could no longer use his eye to earn a livelihood, he had entirely lost the sight of his eye, the court said:

> With this contention of the petitioner we can not agree. We think the words of the statute must be taken in their ordinary sense, and that their meaning is clear. To say that this statute was designed to go any further than to provide for additional compensation for injuries which resulted in total and complete loss of sight would

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[14] Loss of use of foot: Purdy *v.* City of Sault Ste. Marie (Mich.), 155 N. W. 597.
Loss of use of thumb: Adonites *v.* Royal Furniture Co. (Mich.), 162 N. W. 965.
Loss of use of hand: American Car & Foundry Co. *v.* Bischoff (Mich.), 8 Negligence and Compensation Cases Annotated, 479; Davis *v.* Aetna Life Ins. Co., First Annual Report of Montana Industrial Accident Board, 1916, p. 252.
Loss of use of eye: Howell *v.* Wallace & L. Co., Biennial Report of Iowa Workmen's Compensation Commission, 1918, p. 61; Nelson *v.* Kentucky River Stone & Sand Co., Decisions of Kentucky Workmen's Compensation Board, 1917, p. 24.
Loss of use of finger: Bulletin No. 3 of Michigan Industrial Accident Board, 1913, p. 13; Lordie *v.* Grand Rapids etc. Co., Michigan Workmen's Compensation Cases, 1916, p. 17.
Loss of use of arm: Narrell *v.* American Bridge Co., Kentucky Workmen's Compensation Board Leading Decisions, 1917, p. 41.

[15] Davis *v.* Aetna Life Insurance Co., Report of the Montana Industrial Accident Board, 1915–16, pp. 250–256.

[16] Keyworth *v.* Atlantic Mills, 108 Atl. 81.

amount to a distortion of its language. The view which we now take is in accord with the opinion of this court in Weber *v.* American Silk Spinning Co., 38 R. I. 309, 95 Atl. 603, Ann. Cas. 1917E, 153.

The Supreme Judicial Court of Maine made a similar ruling in a case where a workman so injured his third and fourth fingers as to render them stiff, bent, and totally useless.[17] The court said that in order to have compensation under the schedule the fingers must have been amputated. This decision, aside from the expression of principle, is no longer of importance in Maine because the legislature of that State amended the law in 1919 so that it would cover injuries involving a loss of use or the impairment of any physical function. This was also the case in Louisiana, where the law was subsequently amended in 1918 to include injuries resulting in the loss of use.[18]

No cases could be found where California had directly ruled upon the question of the loss of use of a member. This question is, however, of but little importance in that State, because the law provides merely a schedule of percentages of total disability, under which the commission has prepared a complicated schedule or table by which compensation is determined. It is believed that compensation would be awarded for the impairment of a physical function under this law, but only to the extent the injury of the employee bore to total disability, taking into consideration the employee's occupation, age, aptitude, intelligence, etc. In some cases this compensation would be only nominal while in other cases it would be a substantial part of the total compensation for the man's injury.

What Constitutes Loss of Use.

THE determination of what may constitute the loss of use of a member or the impairment of a physical function is left entirely to the discretion of the bodies which administer the workmen's compensation laws. In order to ascertain the principles and construction adopted by the courts and commissions and to obtain illustrations of the application of these principles to specific cases, a thorough survey was made of the available published decisions.

The Supreme Court of Colorado ruled [19] in the case of a miner of foreign birth and low mentality who had broken his leg two inches above the knee, thus rendering the leg stiff and useless so far as engaging in mining was concerned, that the miner had lost the use of his leg and was entitled to compensation as for the loss of the leg. The court, giving the reasons for this construction, said in part:

> We are of the opinion that the widest possible discretion is vested in the commission to determine whether, under a given set of circumstances and a particular state of the evidence, the first or second rule, or a combination of both, should be applied. Age, education, training, general physical and mental capacity, and adaptability, may and often should be taken into consideration in arriving at a just conclusion as to the percentage of impairment of earning capacity.

The fact that with the aid of some mechanical contrivance an injured workman is able to regain a part of the use of an impaired member does not in any way affect his right to compensation for the entire loss of the use of the member. The use to which the member

[17] In re Merchants' Case, 106 Atl. 117.
[18] Norwood *v.* Lake Bisteneau Oil Co., 83 La. 25.
[19] Globe Indemnity Co. *v.* Industrial Commission, 186 Pac. 522.

must be capable of being put must be of practical value in manual labor, so as to enable the employee to resume his former occupation.[20]

The foregoing quotation pretty clearly outlines the general principles upon which the majority of the administrative bodies allow compensation for the loss of use under the permanent partial disability schedules for the loss of a member. The mere inclusion in a law of a provision for the compensating of cases involving an impairment of a function on the same basis as cases involving a loss of a member by amputation, although very greatly simplifying the problem, by no means serves conclusively to solve it. In determining what constitutes the loss of use of a member, the injured man's occupation should take a prominent place, for it is the impairment of his ability to follow his trade or calling for which the compensation laws seek to afford redress. A man who greatly depended upon the use of his limbs, such as a laborer or a railroad conductor, brakeman, or engineer, would be very greatly handicapped and even absolutely prevented from further continuing at his calling by an injury which impaired the function of an arm or leg. In cases of this kind, the impaired functioning of the limb need not mean the absolute inability to employ it for the purpose of performing small personal services [21] such as dressing or eating or the limited use of the member at the same or a different occupation with the aid of some mechanical contrivance.[22] It is now generally recognized that every workman is entitled to the free and unimpeded use of his members at his occupation, and compensation should be awarded notwithstanding the fact that an impairment of a function has not occasioned any reduction in his earning capacity.

The age of the injured man and his training, education, aptitude, and physical condition are also taken into consideration as factors in determining whether or not he has suffered a loss of the use of a member and the extent to which a member has been impaired.[23] The loss of the use of a member may be a more serious matter to an old man than to a young man, for to the former such a loss would be a greater drain upon his vitality and morale. A young man would also be more able successfully to take up a new occupation and thus to alleviate in a measure the hardships resulting from the deprivation of the use of any of his members. The general aptitude of an injured man to take up some new employment where his disability will not be so great a handicap is another consideration which is being regarded as of increasing importance in the determination of cases of this kind. This is reflected in recent legislation of a number of States [24] which have enacted laws for the rehabilitation of industrial cripples. All these considerations, however, only go to the extent of the recovery. As pointed out in an earlier part of this article, a man who sustains a loss of the use of a member is in most States entitled to some compensation for the deprivation he has suffered without regard to his earning capacity in some other line of work.

The application of these principles to specific cases under the workmen's compensation laws may be through a broad and inclusive

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[20] Mark Mfg. Co. *v.* Industrial Commission (Ill.), 122 N. E. 84.
[21] Masett *v.* Hubbard & Co., Pennsylvania Workmen's Compensation Board Decisions, 1916, p. 102; Eadman *v.* J. H. & C. K. Eagles, Pennsylvania Workmen's Compensation Board Decisions, 1917, p. 514.
[22] Mark Mfg. Co. *v.* Industrial Commission (Ill.), 122 N. E. 84. (Loss of use of hand.)
[23] Globe Indemnity Co. *v.* Industrial Commission (Colo.), 186 Pac. 524.
[24] California, Illinois, Minnesota, Nevada, New Jersey, New York, North Dakota, Oregon, Pennsylvania, Rhode Island, Virginia, and the United States.

construction or a narrow and strict application of the statute. The schedules of nearly all the States provide compensation for the loss of each of the various fingers, toes, thumbs, hands, and feet, as well as for the loss of the arms and legs. Some laws also stipulate that an amputation below the elbow or the knee shall constitute the loss of a hand or foot respectively. Under the broad method of construction it has been held that a man who has lost three of his fingers, the entire hand being thus rendered useless for the purposes of his occupation, would be compensated for the loss of the use of his hand and not for the loss of the individual fingers;[25] and where a man has had his arm amputated between the wrist and elbow, but so close to the latter as to render the joint useless, compensation was allowed for the loss of the use of the arm instead of for the loss of the hand.[26] The States that have adopted this method of construction, so far as could be determined from an examination of the published decisions, are Colorado, Illinois, Kentucky, Massachusetts, Michigan, Minnesota, Montana, Nebraska, New York, Oklahoma, and Pennsylvania.

Under the strict construction of the statutes compensation is awarded only for the members actually severed or impaired. Thus in Louisiana the supreme court held that where a man lost by severance his index finger and at the same time the partial loss of the use of his arm, he could only be awarded compensation for permanent partial disability under the schedule for the loss of the finger and the indeterminate compensation for partial disability based upon loss of earning capacity for the loss of the use of his arm.[27] In New Jersey the court held that in a case where a man lost the use of his thumb and two fingers from ankylosis he should be allowed compensation only for that loss and not for the loss of the use of the hand.[28]

Instances of injuries to eyes resulting in the loss of sight without enucleation of the eyeball, or injuries causing such an impairment of the vision as to render the eye useless, have occasioned the courts and commissioners no little difficulty in arriving at just and equitable settlements. Much of the difficulty lies in the wording of the statutes. Where the law allows compensation only for the "loss of an eye" it is possible to restrict compensation to cases where the eye has been actually removed. Thus in New York the appellate division of the supreme court held in the case of Frings *v.* Pierce-Arrow Motor Car Co.,[29] where an employee had lost the lens of his right eye so that it could not be used in coordination with his left eye but when used alone with glasses had a normal vision, that the injured employee had not lost his eye, because should he lose his perfect left eye he would then with the aid of glasses have normal sight in his injured eye. The courts of this State have since adopted a more liberal view, so that now compensation is allowed for the loss of the use of an eye where the power of coordination is destroyed and where the employee retains one-third normal vision in his injured eye.[30] The only State

[25] Rockwell *v.* Lewis, 168 App. Div. (N. Y.) 674; Meley *v.* Mass. Employees' Ins. Ass'n. (Mass.), 106 N. E. 559; Updike Grain Co. *v.* Swanson (Nebr.), 174 N. W. 862.

[26] Pater *v.* Superior Steel Co. (Pa.), 106 Atl. 202; Stocin *v.* C. R. Wilson Body Co. (Mich.), 171 N. W. 352; Lamb *v.* Choctaw Portland Cement Co. (Okla.), 189 Pac. 750; Bristow Cotton Oil Co. *v.* Industrial Commission (Okla.), 188 Pac. 658.

[27] Norwood *v.* Lake Bisteneau Oil Co., 83 So. 25.

[28] Newcomb *v.* Albertson, 89 Atl. 928.

[29] 169 N. Y. Supp. 309.

[30] Smith *v.* F. & B. Construction Co., 172 N. Y. Supp. 581; Bulletin of the United States Bureau of Labor Statistics No. 258, p. 181.

that could be found which still holds to the view expressed in the earlier New York case is Rhode Island. The supreme court of that State has held that compensation could not be allowed under the schedule for "the entire and irrecoverable loss of sight of either eye" where an injured employee still retained 10 per cent of the normal vision in his injured eye, although the eye was absolutely useless in any vocational pursuit at which he might earn a living.[31]

The prevailing opinion, however, seems to be in accord with a decision[32] of the Supreme Court of Illinois in which it was said, in awarding compensation to a workman for the loss of the use of his eye where he still retained one-fourth vision in the injured eye but had lost the ability to use it in conjunction with his good eye:

> For all practical purposes, when a person has lost the sight of an eye, he has lost the eye, and to say that the statute providing compensation for the loss of the sight of an eye does not apply here because of the remote possibility of Kaage losing his good eye, whereby he can through artificial means gain a certain amount of the use of the injured member, is to place a construction upon a remedial act which deprives it of all practical effect.

The other States which are known to have adopted this general theory are Iowa,[33] where compensation was allowed for 50 per cent of the loss of an eye, where the sight of the eye was impaired one-half; Kansas,[34] where an award of compensation for the loss of the use of an eye which had lost the power of coordination was affirmed; Louisiana,[35] where an award for permanent total disability was made to an employee who had so impaired the vision of his remaining good eye as to render him unable to work; Oklahoma,[36] where an award was allowed for the loss of the use of an eye which had 16 per cent vision remaining. The Oklahoma Industrial Commission has, however, refused to allow an award for the loss of the use of an eye which still retained one-third normal vision.[37] Pennsylvania has held that such a loss of sight as to render the remaining vision in the injured eye of no practical benefit was equivalent to the loss of the use of the eye,[38] and in one case has also held[39] that an employee who retained twenty-two one-hundredths per cent vision in his injured eye had lost the use of the eye.

Just where the line is to be drawn in the percentage of vision an injured man may retain and still recover for the loss of the use of his eye can not be determined. It is perhaps best that no effort should be made to fix any definite percentage, so that each case may be decided upon the basis of practical usefulness as a means of earning a livelihood, in accordance with the general considerations outlined above.

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[31] Keyworth *v.* Atlantic Mills (R. I.), 108 Atl. 81.
[32] Juergens Bros. Co. *v.* Industrial Commission (Ill.), 125 N. E. 337.
[33] Howell *v.* Wallace & Linname, Biennial Report of Iowa Workmen's Compensation Laws, 1918, p. 61.
[34] Stefan *v.* Red Star Mill & Elevator Co., 187 Pac. 861.
[35] Brooks *v.* Peerless Oil Co., 83 So. 663.
[36] Roberts *v.* Folsome-Morris Coal Mining Co., Oklahoma Industrial Commission Reports, 1918-1920, vol. 2, p. 272.
[37] Zaione *v.* Rock Island Coal Mining Co., Oklahoma Industrial Commission, vol. 2, p. 208.
[38] Brown *v.* Bessemer, etc. R. Co., Pennsylvania Workmen's Compensation Board Decisions, 1917, p. 204.
[39] Hayden *v.* Lehigh, etc., R. Co., Pennsylvania Workmen's Compensation Board Decisions, 1917, p. 50.

Recent Reports on Operation of Workmen's Compensation Laws.

Indiana.[1]

THE greater part of the report of the Industrial Board of the State of Indiana covers the subject of workmen's compensation (57 pages), the remainder of the pamphlet being taken up with the report of the department of women and children, the boiler department, the department of factory inspection, and the department of mines and mining.

The compensation department reports 35,232 accidents for the year 1918–19, this being a reduction from 37,520 in 1917–18, and 42,000 cases in 1916–17. "The gradual decrease in accidents obviously indicates that accident prevention is being emphasized more and more." Disability continued for not more than seven days in 60 per cent of the cases reported. Of the compensable cases 14,304 were settled by agreement with the approval of the board, while 958 cases were contested. There were 268 fatal cases, and 745 cases resulting in dismemberment; injuries to one or both eyes were suffered in 3,606 cases, "and it has been our observation that nearly all eye injuries could have been prevented by the use of goggles."

Automobile manufacturing was responsible for the largest number of accidents, 2,767 being injured in this line of work. Coal mining is reported as responsible for 2,243 accidents, but it is believed that the actual number was greater, since a great majority of the mines were not operated under the compensation act prior to May 15, 1919, so that accident reporting was probably not complete.

Compensation payments during the three years of the act aggregate more than $3,270,000, the amount for the year ending October 1, 1919, being $1,090,737.83. "These figures represent the actual amount paid out as shown by the receipts in our files. I am unable to obtain definite information as to the medical expense covering these accidents." Fuller reports of medical benefits are urged, and the opinion is expressed that medical, hospital, and surgical benefits received by injured employees during the year amounted to $750,000.

The statistical report presents accidents classified as to industry, cause of injury, nature of injury, wages of injured workman, age, duration of disability, etc. No averages, totals, or summaries are presented. Separate presentation is given for dismemberment cases, fatal cases, children 16 years of age and under, and females.

British Columbia.[2]

THE law of British Columbia provides for exclusive state fund insurance, the cost of administration being met by assessments collected from employers in industries under the act. The industries of the Province are grouped in 16 classes, 4 of these being newly created in 1918. Separate and self-sustaining funds are arranged for in each class, and merit rating was announced as contemplated for the

[1] Report of Industrial Board of the State of Indiana for the year ending Sept. 30, 1919. Fort Wayne, 1920, 109 pp.

[2] Second Annual Report of the Workmen's Compensation Board of the Province of British Columbia for the year ending Dec. 31, 1918. Victoria, 1919, 48 pp.

year 1919. During the two years of operation, the cost of administration was 4.83 per cent of the amount collected from the employers. In none of the 16 classes were the expenditures such as to require a full assessment of the basic rates established. In but one, coal mining, was a full assessment made in 1917, while in 1918 the rate in this class was three-fourths of the basis. In lumbering, etc., the assessment the first year was one-half the basis and the second year three-fourths.

The class funds showed a balance aggregating $206,716.67 besides reserves of $847,024.14. Two of the funds showed deficits, coal mining being short $1,135.55, and municipalities $865.73. The receipts for the two years from assessments amounted to $2,037,079.91 and the disbursements to $980,289.26.

The promptness of action by the board, though it covers a wide area many sections of which are not easily accessible, was shown by the fact that with an average number of claims per month of 1,875, the number unfinished at the end of the year, 1,493, was less than one month's accretion.

The act makes no schedule provision for mutilation or maimings such as is found in many of the State laws, but the board has recognized that in such cases there is in fact "an impairment of true earning capacity, although the evidence in actual loss of wages may not yet have developed." It was found that many workmen who had lost one or more fingers, or even an eye, returned to work shortly after their injury, earning as much as before. However, instead of requiring continued reporting for an indefinite period in order to discover the facts as to wage loss, the board has adopted the practice of estimating the probable future loss of wage to be sustained on account of the disability and making final settlement therefor at 55 per cent of such estimated impairment.

An incidental fact not frequently mentioned in reports of this kind relates to the cost of interruption of work and the replacement of injured employees. "There are many items which must enter into the establishment of definite figures, so necessarily there are many difficulties to be overcome before it can be expressed in terms of dollars and cents." The excitement and natural discussion and examination among the workmen following a serious injury is to be taken into account, as well as the loss of time by a foreman or other person who will naturally be detailed to look after the injured man until he can receive needed attention or be removed from the shop. In fatal cases and other serious injury cases, a new man must be broken in. The estimate is submitted that in a reasonably sized plant the cost of interruption and replacement due to fatal injuries is $50; for permanent and serious temporary injuries, $30; while in those involving from one to five days' loss of time the amount is fixed at $10, and in case of "no time loss" injuries at $5.

A quite full statistical presentation is made with an endeavor "to make an exhaustive analysis of the three primary classifications which are acknowledged to be vital to sound statistical work, i. e., industry, cause, and nature of injury." Of 8,841 accidents producing temporary total disability more than one-half occurred in four classes of industry, shipbuilding leading with 1,444, logging next with 1,282, then saw mills with 943, and coal mining with 932. Of these, 1,954 were due to falling objects, the next cause, producing less than one-

half of this number, 924, being the handling of heavy objects. There were 420 accidents producing permanent partial disability or other accidents classed as of a more serious nature. Of these, 148 caused loss of one finger, 35 of two fingers, 16 of three fingers, and 6 of four fingers. In 24 a thumb was lost, and in 25 others a thumb and one or more fingers. One led to loss of a hand, 12 to amputation of the arm, and 17 to arm impairments. Eye injuries numbered 39, in 25 of which there was the loss of sight of one eye. Pension awards were made in 1918 in the case of 111 fatal accidents and burial awards in 152 cases.

Temporary total disabilities finally disposed of in 1918 caused a wage loss of $944,722.90, on account of which $456,902.45 was paid in compensation.

The report concludes with a discussion of the desirability of uniform compensation laws for the western Provinces and of health insurance as a means of promoting industrial efficiency.

Ontario.[3]

A SUMMARY of the report of the Workmen's Compensation Board of Ontario for the year 1919 shows the total amount awarded to workmen and their dependents to be $4,192,859.93, an average of $14,000 per day. The total number of accidents reported was 44,260, of which 429, or somewhat less than 1 per cent, were fatal; less than one-tenth of 1 per cent resulted in permanent total disability; and about 6½ per cent in permanent partial disability; 57 per cent involved only temporary disability, and about 36 per cent, causing less than seven days' loss of time, received medical aid only.

Omitting fatal and permanent disability cases the time loss was 573,653 working days. The average in temporary disability cases was 19.75 days. In 47 per cent of these cases the time loss did not exceed two weeks. The average cost of all compensated accidents was $135.80, of which $121.71 was for compensation and $14.09 for medical aid. The average cost for all death cases was $2,156.28, the average cost of dependency cases being $3,092.37.

The act has grown in popularity with employers, many making application to bring their industries under the act. Employees have from the beginning generally regarded the act with favor.

The collective liability principle of the Ontario law is in contrast with the individual liability law of Great Britain and with the company insurance individual liability laws in existence in most of the United States. In Great Britain the system of individual liability and court procedure and appeal has rendered the act so unsatisfactory, reducing its efficiency, it is said, to 50 per cent, that a special commission is now seeking a remedy. In the United States, where the insurance companies are allowed to deal with the workmen, investigation has disclosed short settlements and other abuses which seem inevitable under such a system. Statistics there show that under the old employers' liability insurance, after deducting profits and legal and other expenses, less than 25 per cent of the premiums paid by employers actually reached the workmen or their widows and children. In Ontario last year only 1.71 per cent of the assessments paid by employers went toward expenses. Probably under no other law does so nearly the whole of what employers pay for accidents go for the benefit of the injured workmen and their families.

[3] Report for 1919 of the Workmen's Compensation Board, Ontario. Toronto, 1920. 70 pp.

It should be noted in connection with the amount of assessments going toward expenses, that there is an administrative allowance of $100,000 from the consolidated revenue fund of the Province. However, as the assessments, etc., during 1919 amounted to $3,387,207.22 and the total administrative expenses to $167,844.75, there remain abundant grounds for a claim of economical administration.

The number of accidents in 1919 was less than in 1918, being 44,260, as against 47,848 in the earlier year. However, benefits allowed were some $300,000 larger in amount in the later year, partly due to the increase in wages, which afford the basis on which benefits are computed, and partly because of the increase in death benefits and in medical aid under an amendment made in the early part of 1919. The average weekly wage of injured workmen increased from $13.27 in 1915 to $15.63 in 1916, $19.06 in 1917, $21.93 in 1918, and $24.80 in 1919, being a gain of 87 per cent in the five years.

Accident frequency has increased rather than diminished during the four years' operation of the act, 1915 to 1918, unless the apparent increase can be attributed to more efficient accident reporting. In 1915 there were 4.32 accidents for every hundred full year workers, while in 1916 the number was 5.88, in 1917, 6.57, and in 1918, 6.54.

On the other hand, the per cent of the pay roll charged to employers has decreased rather than increased, the total pay roll subject to assessment having steadily and rapidly increased from year to year. In 1915 the subject pay roll was $147,602,561.67, while in 1918 it was $310,450,067.17. The per cent charged employers for the maintenance of the provincial compensation fund was 0.0127 in 1915, 0.0109 in 1916, 0.0099 in 1917, and 0.0109 in 1918; or, figuring on each $100 of pay roll, the rates would be $1.27, $1.09, $0.99, and $1.09 for the respective years. The adjustments for 1918 on account of merit rating led to increased charges amounting to $139,887.41, and refunds amounted to $253,286.92, an excess in favor of employers of $113,399.51.

Statistical tables show the condition of funds, 34 in number, a complete accident report for 1918, including number, month of occurrence, time loss, average age and wage, total and average compensation and medical aid, sex, nature and causes of injury, etc.

Accompanying the report is a memorandum of amendments to the compensation act made in 1920. This shows an increase of compensation benefits from 55 per cent to 66⅔ per cent of the average earnings of the injured worker, the minimum benefit to be $12.50 per week unless the earnings are less, when the full amount will be paid. The maximum allowance for burial expenses is raised from $75 to $125, and a lump-sum allowance of $100 is given the widow besides her monthly pension, which is increased to $40 per month. Other increases apply to children and other dependents, the increase in death benefits applying not only in cases newly arising, but, beginning July 1, 1920, to affect all existing death pensions. Medical aid is to include the supply of artificial members and apparatus and their repair for a period of one year.

SOCIAL INSURANCE.

Pensions for Public Service Employees in Uruguay.[1]

THE law passed by the National Congress of Uruguay, September 30, 1919, relative to pensions for employees in the public service, was made effective October 6, 1919, on which date a decree was issued establishing the State pension fund. The law provides for the pensioning of all employees who now are or may be hereafter employed in the railroad, telegraph, tramway, telephone, and water and gas distributing services in the Republic. Employees in restaurants and confectioneries, adjuncts of the railroad service, are included, even though employed by concessionaires.

The fund is administered by a board of directors (Consejo Nacional) consisting of 9 members, 3 representing the services, 3 representing employees and laborers, and 3 designated by the President of the Republic. It is supported by an assessment of 8 per cent on all wages and earnings of the employees, payable by the employers; an obligatory deduction of 4 per cent of wages paid; donations and legacies; fines collected for violation of this law; receipts from sales of articles abandoned on the railroads and tramways; overpayments not reclaimed within 6 months; interest on accumulated funds; the increase in wages of an employee or laborer the first month after wages are increased, providing such wages equal 50 pesos ($51.70, par), if permanent, and, after three years, a tax of 1 to 3 per cent on charges paid by patrons of the various services. This tax is regulated by the President within the limits indicated with respect to the needs of the fund and the services affected.

The directors of the services included are required to deduct the contribution of employees from accrued earnings and deposit it to the credit of the fund within 10 days after the month ends. The fund is to be invested in national bonds or other recognized subsidiary State-guaranteed bonds paying the highest rate of interest. It is not subject to any process of attachment

Retirement.

TO BE entitled to retirement with full pension a service of 30 years is required, but a right to a proportional pension is acquired after 10 years of service, continuous or not, in any of the mentioned services, if the employee is (1) discharged, (2) physically incapacitated to continue in his employment, or (3) 50 years of age, whether at that date in active service or not.

[1] Boletín de la Oficina Nacional del Trabajo, Montevideo, September to December, 1919, pp. 19-35.

Employees in these three classes are entitled to one-thirtieth part of full pension for each year of service. Persons becoming permanently incapacitated in an act of service, whatever the length of their service, are entitled to retirement.

The scale of pensions is based on the average wages for the last five years of service, and is as follows:

SCHEDULE OF PENSION PAYMENTS UNDER URUGUAY RETIREMENT LAW.

[1 peso at par=$1.034.]

Range of earnings (in pesos).	Minimum pension.	Per cent to be added for each peso of wages in excess of the minimum.	Maximum pension.
	Pesos.		*Pesos.*
50	50.00	.....	50.00
50 to 60	50.00	95	59.50
60 to 80	59.50	90	77.50
80 to 100	77.50	85	94.50
100 to 125	94.50	80	114.50
125 to 150	114.50	75	133.25
150 to 175	133.25	70	150.75
175 to 200	150.75	65	167.00
200 to 225	167.00	60	182.00
225 to 250	182.00	55	195.75
250 to 275	195.75	50	208.25
275 to 300	208.25	45	219.50
300 to 325	219.50	40	229.50
325 to 350	229.50	35	238.25
350 to 375	238.25	30	245.75
375 to 400	245.75	25	252.00
400 to 425	252.00	20	257.00
425 to 450	257.00	15	260.75
450 or more	260.75	10	.....

All pensions less than 100 pesos ($103.40, par) are subject to deduction of 4 per cent. Pensions date from the day following retirement, but application must be made within six months from date of quitting work, otherwise the pension dates from the date of the petition.

In cases (1) and (2), as noted on page 135, the contributions paid into the fund, with interest thereon, shall be deposited with the State Insurance Bank in the name of the contributing employee, who is then entitled to a pension corresponding to the contributions made. The same rule applies to those leaving the service, for whatever reason, before 10 years of service have been rendered.

Upon returning to service, the amount deposited with the State Insurance Bank must be redeposited in the pension fund.

Persons leaving the country forfeit their right to a pension. In case of absence of more than six months' payment shall be made only when expressly authorized by the directors of the fund

Provision for Dependents.

UPON the death of a contributing employee the widow, invalid widower, children, or, if there are no children, the parents, and if these are not living, the unmarried sisters of the deceased are entitled to a pension. If the deceased was in receipt of a pension, the persons enumerated are entitled to a pension subject to the following conditions:

If he had served 10 years, the dependents are entitled to a pension equal to that to which he would have been entitled had he been retired for incapacity. If he had served less than 10 years, the contributions are deposited with the State Insurance Bank, which will grant pensions based upon this sum.

A full pension is equal to 50 per cent of the retirement pension. Pensions run from date of death. Their sequence is as follows:

(1) To the widow, or incapacitated widower, concurrent with the children.

(2) To children alone.

(3) To the widow concurrent with the parents of the deceased, provided they were dependent.

(4) To dependent parents.

(5) To unmarried sisters, if dependent.

Pensions cease upon the widow's or mother's remarriage; when the sons reach the age of 18 years; when the daughters reach the age of 25 years, unless incapacitated. All pensions terminate upon emigration of the beneficiary.

In cases (1) and (2) when the right to a pension ceases as to any one of these, that portion is distributed among the other beneficiaries.

Dependents may not benefit from more than one pension. In case they are entitled to more than one pension they may elect which they will accept.

Employees who desire to claim pensions for periods of employment previous to the date of this law must pay contributions for that period, these contributions to be deducted from present wages at the rate of 3 per cent. If entitled to a pension before the full amount of this sum is paid, the balance shall be deducted from the pension at the rate of 10 per cent per month.

Unemployment Insurance in Austria.[1]

THE new Austrian unemployment insurance act of March 24, 1920, supersedes a temporary measure on the same subject. A change in the unemployment relief system had become necessary in order to relieve the State of its heavy financial burden and because of the steady fall in the number of unemployed. (The number on April 1, 1920, was only 50,000, as compared with the maximum of 186,030 reached on February 1, 1919.)

Under the new act, one-third of the cost of unemployment insurance is to be borne by the State, the remaining two-thirds by employers and workers. The contributions are to be paid at the same time as those for sickness insurance. Only persons who have worked for at least 20 weeks in the preceding year are entitled to claim unemployment benefit. The benefit must not be granted for more than 12 weeks in any year, and payment does not begin until the eighth day of unemployment. Workers who give up their work arbitrarily and without justifiable reason lose all claim to unemployment benefit for a period of four weeks. If an unemployed person has been in receipt of benefit

[1] Extracted from the Labor Gazette, London, for June, 1920, p. 294. Source: Amtliche Nachrichten des Oesterreichischen Staatsamtes für Soziale Verwaltung, April 15, 1920.

for eight weeks and there is no prospect of his obtaining work in his own trade, he must take up any properly paid employment suited to his capacities. If necessary, training must be given in the new trade. Groups of industries in which the conditions of employment are considered to be favorable may be excluded from the benefits of the act.

The benefit for unmarried workers, manual and nonmanual, is to be 60 per cent and for married workers, 80 per cent of the daily sickness benefit due to the worker in the last employment in which he was compulsorily insured against sickness. In order to make the transition to the new system easier, the Government has arranged that for the period during which the disturbance of economic life due to the war continues, the unemployment benefit may amount to 100 per cent of the sickness benefit for unemployed persons with families dependent upon them, and to 75 per cent for others. In certain individual cases workers who have already received unemployment benefits for the maximum period of 12 weeks may be granted an extension up to a maximum of 20 weeks.

The administration of the unemployment relief scheme is to be in the hands of district industrial committees, which are to be composed of employers and employed persons in equal numbers. These committees are to nominate subcommittees, also consisting of an equal number of employers and workpeople, to act as arbitration bodies at each employment exchange for the settlement of complaints formulated by unemployed persons with regard to decisions of the exchange affecting the amount, the refusal, or the duration of relief, etc.

The new act became operative on May 9, 1920.

LABOR LAWS AND DECISIONS.

Rehabilitation Law of New York.

AS NOTED in the MONTHLY LABOR REVIEW for June (pp. 186, 187) the Federal Congress, near the close of its recent session, enacted a law providing for cooperation with the States in the vocational rehabilitation of disabled persons. Such action had been anticipated in a few States, by the enactment of laws looking toward the same end and authorizing cooperation with the Federal Government when it should act; other States had independent laws (see MONTHLY LABOR REVIEW for April, pp. 202–206). The Legislature of New York, by an act of May 13, 1920 (ch. 760), provides for work of the same nature to be carried on by an "advisory commission for the rehabilitation of physically handicapped persons," which is to arrange for the vocational training of persons adapted thereto, cooperation with the department of education, the State industrial commission, and the department of health being contemplated. The State also "accepts the provisions of any law of the United States making appropriations to be apportioned among the States for vocational rehabilitation of disabled persons."

The definition of physically handicapped persons embodied in the New York law is identical with that contained in the Federal statute, as is also practically true of the definition of rehabilitation. The act therefore includes those defective by reason of congenital infirmities or disease as well as from industrial accidents or injuries. Special courses of training in the public schools, in private or commercial educational institutions, and in establishments or employers providing for the training of physically handicapped persons, are to be arranged for, and cooperation in placement is to be so worked out as to avoid duplication. Artificial limbs and other orthopedic and prosthetic appliances may be furnished at cost, to be paid for in installments. An appropriation of $75,000 was made to assist the department of education in carrying out the provisions of the act, this amount to be in addition to any moneys allotted to the State by the Government of the United States.

The act also amends the workmen's compensation law of this State, authorizing the payment of a maintenance benefit of not to exceed $10 per week for injured employees undergoing vocational training. To provide funds for this purpose a special fund is created, to be maintained by payments of insurance carriers in fatal injury cases where no beneficiaries survive. The amount to be contributed is $900 for each case, to be in the custody of the State treasurer and subject to distribution by the industrial commission. This amount is evidently independent of the contribution of $100 to be paid in similar cases for the maintenance of a second injuries fund.

Occupational Diseases Under the Massachusetts Compensation Law.

THE workmen's compensation law of Massachusetts provides benefits for persons receiving a personal injury arising out of and in the course of employment, the words "by accident" not being used in the law. This left the door open to a construction of of the law in regard to the inclusion of so-called occupational diseases, and in a case decided in 1914 (Johnson *v.* London Guaranty & Accident Co., 217 Mass. 388, 104 N. E. 735) compensation was allowed for a case of lead poisoning, the court stating that "under the act, 'personal injury' is not limited to injuries caused by external violence, physical force, or as the result of accident in the sense in which that word is commonly used and understood, but under the statute is to be given a much broader and more liberal meaning, and includes any bodily injury." It is further stated that "it is clear that 'personal injury' under our act includes any injury or disease which arises out of and in the course of the employment, which causes incapacity for work and thereby impairs the ability of the employee for earning wages."

But a few weeks prior to this decision the same court sustained an award in behalf of a workman who was blinded by the inhalation of poisonous gases while employed in an establishment in which he was exposed to this danger (In re Hurle, 217 Mass. 223, 104 N. E. 336; see also Doherty's Case, 222 Mass. 98, 109 N. E. 887).

In view of the definite and apt statement as to the scope of the act, and the repeated affirmations of awards classifiable as occupational diseases, the law of Massachusetts had been regarded as in the same class as the Federal law and that of North Dakota, in that it was believed to include occupational diseases by a construction based upon the phraseology of the law, not indeed specifically including such injuries, but not excluding them and thus leaving the administrative parties free to make awards for this form of industrial injury as well as for the results of accidents. This view was also in line with the liberalizing tendency manifested in the amendments of the laws of California, Connecticut, New York, and Wisconsin, specifically including occupational diseases. It was a considerable surprise therefore to read in a decision of May 22, 1920 (Pimental's Case, 127 N. E. 424) the following: "If it could be held that the employee was suffering from an occupational disease, still the workmen's compensation act does not in terms include disease. It can not be held to cover disease contracted by employees in the course of and arising out of their employment." The opinion in this case was written by Judge Crosby, who also wrote the opinion in the Johnson case in which a diametrically opposite statement (see quotation above) was made. The court said in this connection that "The language in the opinion in the Johnson case is to be limited to the precise facts in that case and is not an authority in favor of the contention of the employee in the case at bar."

The case at bar did not involve occupational diseases, but was one in which neuralgic pain was developed as the result of a faulty position assumed by a deformed man while employed steadily at laborious work. The declaration that the law "can not be held to cover disease contracted by employees in the course of and arising out of

their employment" is not therefore essential to the decision, as it was found by the court that the condition "would have been equally liable to arise in whatever employment he might have been engaged or if not employed at all." Perhaps there is still room to hope that this broad exclusion of occupational diseases will be regarded as obiter, and not a binding precedent, though it must be admitted that it makes uncertain the attitude of the court so clearly expressed in 1914 in the Johnson case.

Injunction in Strike for Closed Shop Upheld by Wisconsin Court.

THE Supreme Court of Wisconsin recently delivered an opinion of special interest by reason of its interpretation of a type of law that has received considerable attention. The law under consideration was chapter 211 of the Acts of the Wisconsin Legislature of 1919 and is patterned after the Federal statute known as the Clayton Act. It provides that the antitrust laws of the State shall not be applicable to labor organizations; that labor unions are legal and may be organized for aiding workers in securing improved conditions of employment; and that no restraining order or injunction shall be issued in cases between employers and employees growing out of disputes "concerning terms or conditions of employment" unless necessary to prevent irreparable injury to property or a property right for the redress of which there is no adequate remedy at law. It was also provided that picketing and peaceful persuasion are not to be the subject of injunctions.

In the case at hand (A. J. Monday Co. *v.* Automobile, etc., Workers of America, 177 N. W. 867) there was a strike of members of a local union employed by a company whose business was the building, painting, and trimming of automobile bodies. No question of wages or hours was involved, the sole point being the refusal of the employer to establish a closed shop. An injunction was issued restraining the members of the union and other defendants from certain acts of interference with the conduct of the employer's business. The contention was raised that such an injunction violated the act above mentioned, and a motion was made to vacate the order. The court held, however, that the act was not applicable to the present case, since none of the things enumerated in it as looking toward the betterment of employment conditions was involved in the case. "It is a strike purely and simply for the closed shop. The closed shop does not aid the members of Local No. 25 to become more skillful or efficient workers, to promote their general welfare, elevate their character, or to regulate their wages, hours, or conditions of labor in any except an indirect and remote way." The constitutionality and construction of the act were, therefore, not discussed, as not being involved in the case. The motion to vacate was denied, as was the employer's motion to extend or amend. It was modified so as to restrain picketing and patroling and guarding the streets, and also so as to permit advice and persuasion by peaceful and lawful means to prevent workers from accepting employment and customers from patronizing the plaintiff's establishment.

Decision of Kansas Court of Industrial Relations as to Certain Employees of Railroads.

THE International Brotherhood of Stationary Firemen and Oilers, as existing in the State of Kansas, came before the State court of industrial relations in March last with a complaint as to the amount of wages received. The complaint was submitted by the vice president of the brotherhood in behalf of himself, an employee of one of the roads, and of 25 local unions of the brotherhood located at various points in Kansas. The respondents were nine railroad companies operating in that State as common carriers.

The workmen involved were not directly connected with the movement of the trains, but were engaged in various capacities at work which directly affected their operation. Among the workmen involved were stationary firemen, engine watchmen, turntable operators, engine wipers, fire builders, oilers, cinder and ash pit men, and, in general, laborers working in and about engines, turntables, roundhouses, and store and supply houses. The employers are engaged in both intrastate and interstate commerce.

The complaints alleged insufficient pay, and the court found that the wages were in fact inadequate to supply a family "with the necessaries of life and a reasonable share of the comforts of life," though an unmarried man could get along fairly well on the present wage.

The carriers were unwilling to submit the matter to the State court of industrial relations, the subject being presented by the representative of the brotherhood with the request that the court take jurisdiction of the controversy and make such investigation as would enable it to determine a reasonable wage. The railroads filed answers which were very similar. Among their statements were a general denial, a claim that the respondents were engaged in interstate commerce, that under the transportation act of 1920 they are paying wages fixed by the Director General of the United States Railroad Administration, that the industrial court has no jurisdiction on account of the provisions of the transportation act of 1920 for the settlement of disputes by the railroad labor board, etc. The legal questions involved made it necessary for the court to decide first of all as to its jurisdiction, and whether its findings would conflict with the provisions of the transportation act of 1920. A quotation was made from a decision of the United States Supreme Court (Simpson *v.* Shepard, 230 U. S. 298) setting forth the competence of a State to govern its internal commerce and adopt measures of a reasonable character in the interests of its people, "although interstate commerce may incidentally or indirectly be involved." It was decided that any action that the court might take would be presumed to be fair and reasonable, and if so, no injury could come to interstate commerce and no unnecessary burden be imposed upon it. Neither could it be presumed that the Federal labor board would render an award which would be unfair to the public, nor that the court of industrial relations would refuse to approve a reasonable order made by the labor board if such was accepted by the disputants. The Kansas law provides only that the orders fixed by its court

shall continue "for such reasonable time as may be fixed by said court, or until changed by agreement of the parties with the approval of the court." This was held to make it entirely possible for the State and Federal laws to exist side by side without conflict, leaving each free to act in its field, and providing a ready means of adjustment if anything in the nature of conflict should arise.

It was concluded therefore to issue an order to be effective for six months from July 1, 1920, unless changed by agreement of the parties with the approval of the court, the scale to apply only to actual residents of the State of Kansas, members of the International Brotherhood of Stationary Firemen and Oilers, and such other railroad employees performing the same or similar services as are not now being paid wages under existing agreements. Only a few of the men were said to be what are usually called "skilled laborers." "Some of them are what is known as 'common laborers,' but a very large number of them are engaged in a work which calls for some skill and much care and fidelity."

The eight basic considerations that have been cited in other findings by the court are again brought to mind—the scale of wages paid for similar kinds of work in other industries, the relation between wages and the cost of living, the hazards of the employment, the training and skill required, the degree of responsibility, the character and regularity of the employment, inequalities due to previous adjustments, and the skill, industry, and fidelity of the individual employee. It was recognized that the rates fixed were not as high as for similar work elsewhere, but they were fixed upon as reasonable in view of the steadiness of the employment. The highest rate, 60 cents per hour, was ordered paid to chief stationary engineers, coal-hoisting engineers, and clam-shell engineers. Stationary firemen and stokers receive 55 cents per hour; stationary oilers, boiler washers, boiler fillers, water tenders, power operators, transfer operators, and turntable operators, 53 cents per hour; pumpers, storehouse and warehouse foremen, and countermen 50 cents per hour; engine watchmen, janitors, engine washers, engine wipers, fire knockers, etc., 47 cents per hour; while helpers and workmen of lower grades receive 45 cents per hour. While much of the work must be done on all the seven days of the week, "the members of the court feel that the seven-day week ought to be discouraged." To this end a revolving system was recommended, but the court did not deem it wise to embody such a system in an order, and based the wage scale on an eight-hour day with time and one-half for overtime, Sundays, and legal holidays. This order was issued June 16, 1920, to be effective on the first of the succeeding month.

HOUSING

Housing in Great Britain.[1]

HOUSING has been a "problem" in all civilized countries, in all times, but the lack of proper habitation for the working classes was never so acutely felt as at the close of the war. All countries seem to have suffered about equally in this respect, whether or not they were actual participants in the war. The practical cessation in building for over four years was in itself sufficient cause for this lack, but beyond that there seems everywhere to have come a sudden focussing of determination to secure better living conditions for workers. In spite of the fact that all countries are faced with the housing problem, England is probably the only country in the world that has yet evolved and entered upon a national housing program.

Some 10 years before the war approximately 100,000 new houses were being built annually in England and Wales, almost wholly by private enterprise, to supply the normal working-class demand. For various reasons, however, such as the increased cost of building materials, the decreased output of labor, and especially the decreased pecuniary benefit of speculative builders consequent upon the preceding causes, but also, and to a greater degree, upon certain duties imposed under the finance act of 1909–10, coupled with some uncertainty as to the ultimate effect of that act, this high rate of production was not kept up. Thus, there was already a considerable shortage in housing throughout the country, when, in 1914, all building not directly required by war operations practically ceased.[2] The houses built during the war were chiefly in the munitions areas, and then only with a free State grant of something like one-third of the capital expended. It was conservatively estimated, therefore, that at least one-half million new houses were sorely needed when the armistice was signed, in order to anywhere near adequately provide decent living quarters for the families of men engaged in industry. Even under normal conditions this would have been a formidable undertaking, but at that time it was almost unthinkable. The building industry of England had, it is estimated, lost 200,000 (or one-quarter) of its able-bodied skilled men, and the cost of materials had advanced so enormously that even the proper repair of existing buildings promised to be difficult after their years of neglect. The reconstruction period rendered the future most uncertain, and the agencies formerly engaged in providing housing were reluctant, if not totally unable, to set about the undertaking.

[1] The data on which this article is based were secured from the Local Authority Assisted Housing Schemes Regulations, 1919, issued by the Ministry of Heath, Dec. 31, 1919; circulars and official memoranda of the Ministry of Health; Housing; Monthly Circular of the Labor Research Department; Handbook of Local Government for England and Wales, published by the Labor Party; Local Government Chronicle; Garden Cities and Town Planning Magazine; Bulletin of the Federation of British Industries; Ways and Means; The Garden City, by C. B. Purdom; The Housing Problem, by J. J. Clarke; the London Times; the Daily Herald; and the Manchester Guardian. Personal information was also furnished by Sir Frank Bines, of the Office of Works; Mr. G. L. Pepler, of the Ministry of Health; Mr. E. C. P. Lascelles, of the Ministry of Labor; and Mr. E. G. Culpin.

[2] See MONTHLY REVIEW, December, 1917, pp. 220–229.

Housing Acts.

DURING the last months of the war the Government, through the Ministry of Reconstruction, initiated a housing program, the work of which was taken over in 1919 by the new Ministry of Health. The first step toward the working out of this program was accomplished with the passage of the housing and town-planning act, July, 1919. This act made the local authorities responsible for providing the necessary housing accommodations, but the Government, having to undertake responsibility for the financial results, was to have complete control and supervision of all undertakings. The community and the Nation were each to provide a specified proportion of the cost of building.

Within a few months, however, it became apparent that the difficulties in the way of raising funds in the various communities were retarding the effects of the act to such an extent that results were almost negligible, and accordingly a new act was passed, the housing (additional powers) act, December, 1919, giving the minister of health authority under specified conditions to make grants for houses, or, in other words, to invite private enterprise to cooperate and to offer it a subsidy for so doing.

The two acts of 1919 clearly give evidence that the State admits its responsibility for the housing of the working classes and no longer regards it as a purely local problem. Earlier legislation had given local authorities power to develop housing schemes but also gave them the burden of providing the necessary financial backing. Now, under the new acts, the Ministry of Health is empowered to require the local authorities to prepare and carry out schemes for needed housing, and also, for a specified number of years, to pay to them out of State funds 75 per cent of any loss resulting from the difference between the economic rent on the increased cost of building and the reasonable rent which working-class tenants can bear.

The ministry also has power to put through a scheme of its own and assess the locality its proper share.

The housing (additional powers) act of last December marks a further advance in its appeal to private enterprise. It provides £15,000,000 ($72,997,500, par) to be used for grants to persons or associations of persons who will construct houses for the working class.

The additional powers act enables the minister of health, with the sanction of the Treasury, to make grants for houses, the construction of which is begun within one year after the passage of the act and completed within that year, or, in special circumstances, within four months longer. The grants allowed vary with the accommodation provided, and as the act was passed were as follows:

For a cottage containing living room, parlor, and three or four bedrooms, and comprising not less than 920 square feet of floor space, £160 ($779, par) per house.

For a cottage containing living room and three bedrooms, and comprising not less than 780 square feet of floor space, £140 ($681, par) per house.

For a cottage containing living room and two bedrooms, and comprising not less than 700 square feet of floor space, £130 ($633, par) per house.

These provisions were amended on May 14, 1920, when the Ministry of Health announced that, in view of the increased cost of building, the grant to private builders had been increased as follows:

One hundred pounds ($487, par) per house for houses begun on or after April 1. Fifty pounds ($243, par) per house for houses begun before April 1 and after December 23, 1919.

Thus the total grant for houses begun on or after April 1 is £230, £240, or £260 ($1,119, $1,168, or $1,265, par) a house, according to the size of the house.

No grants are made for house having more than four bedrooms, and the number of houses per acre is restricted to 20 in urban areas and 8 in agricultural areas, except with the express concurrence of the Ministry of Health.

For convenience and to secure more rapid progress the housing department of the Ministry of Health has been subjected to drastic decentralization. The country has been divided for housing purposes into 11 regions, each with a regional commissioner, armed with large delegated powers of assent or dissent, and readily accessible to each local authority in his district at all stages of the housing scheme which it has in hand.

Results of Housing Survey.

UNDER the new housing acts each local authority was required to make a return of a survey of the housing needs of its district for the next three years to the Ministry of Health. The results of his survey are given in the May 10, 1920, issue of Housing, the official organ of the ministry. Absolute accuracy in such a survey is obviously impossible, but the net number of houses shown to be required to meet the needs of the country—800,000—is accepted as being nearer the truth than was the previously estimated 500,000. The general schemes submitted by the 1902 local authorities provide for a total of some 600,000 houses; over half of the schemes are classified as satisfactory and only 40 as unqualifiedly unsatisfactory.

Factors of the Problem of Housing Reform.

ACCORDING to the Labor Party's Handbook of Local Government, housing reform involves: (*a*) The provision of new houses; (*b*) clearance of slum areas and preparation of improvement or reconstruction schemes; (*c*) closing and demolition of unfit houses and obstructive buildings; (*d*) the improvement and repair of existing houses.

Obviously the provision of new houses (*a*) should involve such careful selection of sites as to insure that the newly built areas shall not give rise to more of the conditions which make (*b*) and (*c*) necessary. This naturally is less difficult in rural and village communities than in urban districts, but the financial problem generally can be solved more easily in the larger commercial centers so that in general neither rural nor urban district has any great advantage over the other, and apparently both are suffering about equally from lack of housing. To provide inadequate and unsuitable housing to meet the emergency would be only to increase the areas to be cleared later on and would have little effect in promoting the general well-being of industry.

As to whether the housing program should lay emphasis on quick results or on permanence and quality, the London Times says:

> We are not concerned to defend the policy of the Government or to contend that there is no truth in the charges of delay, incapacity, greed, and what not that have been urged against the various interests and agencies engaged in building or in not building. A mistake was undoubtedly made in relying too much on municipal authorities and ignoring private enterprise. And the lesson should not be lost. * * * It is a warning against policies inspired by doctrinnaire theories and at variance with practical experience. * * * Criticism has a proper function; it corrects and stimulates up to a point. But carried too far it is more than sterile; it sterilizes. And there has been enough of it for the present. * * * But a general advance is incompatible with an immediate production of houses on a large scale. Plans must be carefully prepared, and many details settled before the work of building is approached at all. * * * And this not in a haphazard way, but in accordance with a considered scheme of development and with an eye to the future. * * * Delay is the price paid for quality and eventual satisfaction.

Treatment of Slum Areas.

ON JUNE 10 the minister of health, replying to questions of members of the House of Commons, said that his department had already approved schemes for the purchase of building sites in the county of London covering 777 acres, at an average cost per acre of £564 ($2,745, par) and in the rest of the Metropolitan Police district, covering 2,646 acres, at an average price per acre of £309 ($1,504, par). Further he said that local authorities throughout the country had been requested to proceed with the survey of the unsanitary areas in their districts and with the preparation of schemes in the most urgent cases. Already improvement schemes had been submitted for areas comprising 10½ acres and having 494 houses occupied by 2,938 persons of the working classes. Sanitary housing accommodation, under the new regulations, to take the place of that removed, was to be provided for 2,820 persons.

While agreeing that 10½ acres was a very small percentage of the slum areas in the country's industrial towns, the minister said it was scarcely practical to deal on a large scale with slum areas or to undertake the demolition of houses until much more had been done to meet the prevailing shortage of houses.

This and other points entering into the housing problem are dealt with in the interim report of the committee which the minister of health appointed with the following terms of reference:

> To consider and advise on the principles to be followed in dealing with unhealthy areas, including the circumstances in which schemes of reconstruction, as distinct from clearance, may be adopted, and as regards cleared areas, the extent to which rehousing on the site should be required, the kind of housing which should be permitted, and the use of the site for factory or other purposes than housing.

A summary of the report follows:

> From our survey of the position and from the evidence we have received three main impressions have been left upon our minds:
>
> First, the vast size and complexity of the problems to be solved in London;
>
> Second, the fact that the housing question is so intimately linked up with the transport question and the ultimate distribution of dwelling houses, commercial and industrial premises, etc., that it can only be successfully attacked by the simultaneous consideration of all these aspects over a wide area; and
>
> Third, the fact that at present the situation is dominated by the acute shortage of houses, which makes any large scheme of reconstruction impossible for some considerable time. Incidentally, this inevitable delay at once gives opportunity for

further consideration of the ultimate solution and indicates the necessity for temporary devices of a palliative character.

Workmen's fares.—The question of the cost of traveling has an important bearing on the problem.

Results of overcrowding.—Undoubtedly the result of overcrowding has been to deteriorate property itself as well as the health of the inhabitants. Many thousands of houses originally built for one family are now occupied by two or even three or more, without any addition to the sanitary and washing conveniences, etc., and even where the houses themselves are not overcrowded, the absence of these conveniences renders them insanitary. Thus it may be said that the condition of working-class dwellings in London is considerably worse now than it was before the war, and the combination of overcrowding and deterioration makes the problem of improvement extremely urgent.

Alternative methods.—In view of the excess population in the crowded areas of London, it is clear that there are only two main alternatives before us by way of remedy. The one is to allow the population to expand vertically instead of horizontally; the other, to remove a large part of it bodily elsewhere, rearranging what is left on the old sites, but with adequate accommodation, including the requisite open spaces.

Multi-story buildings.—The first alternative has recently attracted a good deal of attention. It has been represented that it would require no interference with existing industries, and that the piling up of the population in lofty buildings would enable considerable open spaces to be left below, which could be used as recreation grounds for children or as parks and gardens. Nevertheless, we are convinced on the evidence before us that this system is quite unsuitable for a working-class population who are dependent on their own efforts for domestic services and the care of their children.

Redistribution.—Turning now to the second alternative, namely, redistribution, it is obvious that this is a method requiring considerable time in its application, and one which must be combined with measures of prevention as well as of cure. It would be useless to hope for improvement in the congested areas if these are allowed to become still more congested by the further demolition of houses to make way for more profitable buildings, and it would appear necessary to take measures to discourage any increase of labor-employing establishments in such areas. A recommendation with this object will be found among our conclusions.

Garden cities.—Many of the factories now located in London might apparently have been placed elsewhere without any disadvantage to themselves, and we are strongly of opinion that, side by side with the restrictions we suggest below upon factories in London, there should be encouraged the starting of new industries and the removal of existing factories to garden cities which should be found in the country where the inhabitants will live close to their work under the best possible conditions. Generally speaking, these communities should not exceed from 30,000 to 50,000 people, and should be surrounded by a belt of agricultural land for the purpose of health and recreation, and for local food production.

Slum clearance.—If, by the adoption of preventive measures and the creation of garden cities which would at least provide for the natural increase in the population of London, we can stop further deterioration of the central area, the first step will have been taken toward the improvement of the existing state of things. In considering what has already been done in the way of slum clearance your committee have been impressed by the fact that all attempts to rehouse the existing population appear to have been completely disconnected from one another or from any conspectus of the problems as a whole. The interrelation of housing, transport, and industry has not been taken into account.

Unhealthy areas, methods of treatment.—Although we have spoken of the reconstruction of London and of the clearances to be made in unhealthy areas it is obvious that until new houses are available in sufficient number to drain off the excess population no such clearances can be made. Are we thus condemned to fold our hands and do nothing to improve the existing plague spots of London for an indefinite period of years? To this question your committee return an emphatic negative.

It must be borne in mind that, however much the inhabitants of unhealthy areas dislike and resent the conditions under which they live, they do not in a great many cases desire to leave the locality in which they have been brought up, where they live among their friends and where they find themselves conveniently close to their work. Moreover, the effect of slum clearances in the past has often been to push the old inhabitants out into adjoining areas which have thus become themselves overcrowded and consequently have rapidly degenerated into fresh slums. Our evidence shows that where new dwellings have been erected in place of those demolished very few of the original occupiers have returned. We were informed, for instance, that as regards six improvement schemes carried out by the London County Council, only

about 2 per cent of the displaced population became tenants in the new dwellings. Various reasons are given for this remarkable fact, including the tenants' dislike to new and strange conditions, their objection to the measure of discipline exercised, and perhaps also to the higher rents charged. We are not satisfied that any persistent and continuous effort has been made to retain them; on the contrary, it is probable that a certain selection has been exercised in the choice of the tenants of the new buildings which has had the effect of introducing a somewhat different class.

In Liverpool, where determined efforts have been made to retain the old inhabitants, undoubtedly a very large part have come back, but in London the old population has for the most part flowed into the surrounding areas, and in this connection it must be remembered how large a part the obtaining of credit plays in the life of the poorer population and how necessary it is for them therefore to remain in the locality where they are known.

Generally speaking, we are of opinion that it is wise to avoid a sudden change in the conditions and standard of life of the classes we are considering. It was the opinion of the late Miss Octavia Hill that old houses when carefully repaired and kept under kind but strict supervision provide quite as good homes for working-class families as new buildings or houses; and, moreover, the rents of such houses can be kept comparatively low, as large amounts of capital have not been laid out upon them. This opinion was confirmed by Mr. George Duckworth, who has had great experience in working under the late Mr. Charles Booth. Property managed on the Octavia Hill system exists in London to-day and shows not only that it can be kept clean and comfortable, but that under this management the general standard of life among the tenants rises very considerably. We believe that the system might be extended with immense advantage to all concerned pending the possibility of reconstruction, but we do not see how any such extension is to take place upon the present system of ownership.

Restriction of Luxury Building.

THE housing acts give the minister power to restrict so-called "luxury building," i. e., construction or alteration which may in his judgment interfere with the building of dwelling houses. This power he has utilized in the London area to the dismay of projectors of building schemes for offices, hotels, works, and places of amusement, who protest that this prohibition deprives many mechanics of work and does not help housing, "because the men employed on ferro-concrete and steel structure," for example, "do not build houses."

This restriction of so-called luxury building also has another effect. The lack of office buildings almost equals that of houses and the result has been that would-be office tenants have taken over hotel rooms for their purpose and this in turn considerably curtails the already meager supply of hotel accommodations available for legitimate travelers and visitors. Thus each phase of the housing question reacts upon all the others.

At the end of June the Government was reported to be drafting a new housing bill which will definitely fix the powers of the Ministry of Health along certain lines which have been found to be inadequately established by the existing laws, especially with regard to restriction of luxury building, and the seizing of empty houses to be converted to working-class uses.

Effect of Changes in Employment Upon Housing Needs.

THE effect upon housing needs of changes in employment between prewar and postwar conditions is being consistently considered by the Government. The temporary emergencies of war times could be met by temporary expedients but the problem now is to provide for permanent needs in so far as they can be forecast.

Many local authorities have been enormously hampered in their plans by uncertainty as to the ultimate disposal of Government plants—dockyards and munition works—and of collieries. Some huge plants established during the war will of course be abandoned but final decisions have not yet been possible in many cases. Then again in some instances where works have been definitely closed the other local industries may expand sufficiently to absorb the released workers, but much of this possible expansion is still uncertain.

Changes in local distribution of employment are shown in the following table, which gives the number of persons employed in industrial establishments at the date of the armistice and in July, 1919, respectively, expressed as percentages of the numbers employed in July, 1914, in various geographical divisions:

PERCENTAGE CHANGES IN LOCAL DISTRIBUTION OF EMPLOYMENT.

Division.	Before the war.	At the armistice.	July, 1919.
London and South Eastern	100	115	110
South Midlands and Eastern	100	92	100
South Western	100	102	108
Yorkshire and East Midlands	100	98	104
West Midlands	100	106	105
North Western	100	91	96
Northern	100	96	105
Wales	100	88	98
Scotland	100	95	99

The London County Council and the Royal Statistical Society have suggested that the proposed census of 1921 should "take account of workplace, as well as residence, whereby local authorities would have information with regard to the number of persons working in their area and the relation between place of work and place of residence, while in subsequent enumerations the trend of industrial and commercial development could be determined."

There has been discussion, for a long time, in England of the question of retention of commerce and business in the central area and of the removal of factories to districts outside. Congested traffic due to insufficient facilities prevails in every thriving town of the United Kingdom as it does in every country to-day.

Housing, speaking upon this subject in a recent issue, has the following to say regarding the housing and traffic problems of London:

> In London, especially, the removal of factories is a matter of great importance in view of the growing urgency of the traffic problem, which is almost as serious as the housing problem itself. In traffic, as in housing, there has been a cessation of construction, but whereas in housing there has been no abnormal increase in the population in recent years, in traffic the demand has increased almost beyond control.
>
> The number of passenger journeys increased from 600 millions in 1894 to 1,019 millions in 1904, to 1,459 millions in 1909, to 2,005 millions in 1914, and to 2,573 millions in 1919.
>
> At the rush hours, when workers are traveling to and from their work, the pressure is almost intolerable, and the shortening of hours and the increase of wages and leisure are resulting in intensifying the pressure.
>
> If factories were removed from the central districts into the outskirts, even before houses were erected in the immediate neighborhood, the result would be that the workman would travel in uncrowded conditions in the opposite direction to the rush traffic. From the manufacturer's standpoint there are sound reasons for removing his industry into the outskirts where land is cheap, especially in cases where expansion has become necessary; business and commerce (as distinguished from industries)

will continue to be concentrated in the central districts, and the increasing demand for premises of all kinds should enable a manufacturer to secure a high price for his vacant factory buildings. Another desirable result would be to retard the encroachment of commerce on housing, and thereby reduce the total amount of new housing to be provided.

Hitherto, however, the outward movement has been exceedingly slow.

The suggestion that new industrial towns should be established outside London was considered by the Select Committee on Transport (Metropolitan Area) in 1919 and was reported as valuable, the committee laying stress on the fact that the establishment of residences without industries would not respond to the actual public requirements. Public opinion in favor of the joint establishment of industries and residences is growing in force.

Garden Cities.

Letchworth.

THE most conspicuous example of transferring industries and population from congested areas to newly developed self-contained towns is found at Letchworth, in Hertfordshire, some 35 miles (or 50 minutes by rail) north of London. This town was inspired by Ebenezer Howard's Garden Cities of To-morrow, published in 1898. The basic idea of this book is to deal at once with the two vital questions of overcrowding in towns and the depopulation of rural districts. A group of people purchased a tract of open country, about 4,500 acres in extent, and in 1904 formed a company, with dividends limited to 5 per cent, for the purpose of developing this land into a garden city. The area near the railway was reserved for factories, other areas were reserved for residential districts, with a strict limitation of the number of houses to the acre, and a central area was left vacant so that at a later date, when the town had developed, it could be used for public buildings and offices. A shopping center was situated close to the railway and bordering on the central square. A large amount of land was reserved for parks and open spaces. Of the entire tract about one-third was allotted to the town proper, the remaining two-thirds (or 3,000 acres) forming a permanent agricultural belt of small holdings and small farms.

It is calculated that the town, when fully developed, will have a population of some 30,000, and already there are more than one-third of that number and over 40 factories.

The combination of the advantages of town and country would seem to have been safeguarded in this instance by the permanency feature of the agricultural belt. The scheme provides that if necessary other rings of alternating town and agricultural lands can be added. This is possible in this case, as there are no large towns immediately adjacent.

This town-planning experiment does not, of course, solve the vital problem confronting England to-day—the provision of housing for communities already established. It is, however, of the greatest importance as showing what can be done to forestall a repetition of the existing congestion, once the present emergency has been overcome.

It should be noted in passing that Letchworth was not intended as an industrial experiment exclusively, and that a fair amount of its acreage is devoted to the houses of well-to-do people who are not connected with its factories. It is in fact a miniature self-contained ordinary town, having people of all classes, except the very poor, and,

so far as the industrial housing problem goes, was a great attempt at constructive reform—the provision of decent conditions for the average artisan who can afford to pay a fair rent, but is unable to get decent accommodation. Naturally, however, the lowest-paid labor also was attracted to the town and was to some degree necessary to the local industries, and this class gravitated to its accustomed level of accommodation because that level could be found, owing to the proximity of a few old villages. Not only did these workmen take possession of existing lower-standard accommodation in these old villages, but also speculators took advantage of the ill-advised demand to increase the number of unsightly and objectionable cottages, using poorly paid labor and inferior material. The leaders in the Letchworth scheme advise the builders of the next garden city to bear this condition in mind and seek a more isolated location—a difficult undertaking, however, in England.

Welwyn.

A second real garden city has now been successfully launched at Welwyn by a private company, several of whose members were interested in Letchworth. Welwyn is about 15 miles from Letchworth and that much nearer London. The total area of the site is nearly 4 square miles, 1,600 acres of which have been planned as a town intended to house between 40,000 and 50,000 people, the remainder being retained as permanent agricultural or park land. The company will provide water, gas, electricity, and drainage, and develop the town as a complete unit, laying out residential, shopping, and park areas, erect public buildings, and equip factory sites with power, railway sidings, etc. Building has already commenced and it is hoped to have 500 houses completed by the end of the year.

There is sufficient gravel, sand, and brick earth on the site for the building of a town, together with considerable timber, all of which will operate to reduce the cost of building.

The company is issuing 250,000 seven per cent cumulative shares of £1 ($4.87, par) each at par, the financial basis of the scheme being the improvement of land values by the conversion of rural into urban land, to which the whole of the expenditure by the company and the builders and the inhabitants will contribute. "The return to the shareholders is therefore purposely limited to 7 per cent." Welwyn is likely to develop more rapidly than Letchworth, owing to its greater proximity to London, to the present generous subsidies and other aids of the Government, and to the fact that advantage can be taken of the experience gained at Letchworth.

Several companies, more or less allied to the promoting company, have been formed to undertake the building of houses, and a prominent London newspaper has secured 50 acres of the estate on 999 years' lease and proposes to construct an "ideal village" of middle-class houses costing from £500 to £750 ($2,433 to $3,650, par) each. One of this village's leading purposes is to display and test new methods of construction. Specimen houses will be erected, after they have first formed part of an exhibition in London, and communal advantages, such as common orchards and parks, will be added to this ideal village. The project will obviously be of great value to housing authorities, as it will enable them to see in one center, in actual

use, numerous varieties of alternatives to the brick house, without journeying to many different districts to collect their technical information.

Other Cities.

But for the war undoubtedly other garden cities would have been projected. There are throughout the country many admirably planned and well conducted villages, such as Port Sunlight, Earswick, Bournville, Woodlands Colliery Village, etc., which are designed to provide housing for the workmen in some particular, well established industry. Also, some admirable permanent housing schemes have been successfully put through since the beginning of the war under Government supervision, such as those at Coventry,[3] Roe Green,[4] and Well Hall,[5] outside Woolwich. Well Hall was planned and completed under forced speed by the Government during 1915 when the huge increase in munition workers at Woolwich made it one of the war's vital necessities. However, a wise foresight enabled the Office of Works to put through a permanent scheme of extraordinary merit which is of the utmost benefit now that the war demand is over. Other schemes of a temporary character were also carried out at Woolwich, but the resulting accommodations were far from satisfactory at any time and, in general, conserved neither time nor money. The houses of these latter schemes will be razed as soon as other accommodations can be provided.

Garden Suburbs

"GARDEN suburbs" (by no means to be confused with "garden cities") are no solution of the problem of providing housing for workpeople. In any well-established city of considerable size they have to be located so far from the work places that the daily journeys are almost prohibitive, while the sites are so expensive as a rule that the class for whom the houses are designed can not afford to live in them.

In writing of such unsuccessful attempts about London, Mr. Purdom, secretary of the Garden Cities and Town Planning Association, says—

> To buy up private open spaces, and agricultural land in the country or just outside, including some of the richest agricultural land in the neighborhood, and build houses there at an enormous cost for additional transport, in other words to continue the incoherence of London development, is such a casual and feeble proceeding, bereft of all foresight and lacking any grip of economic factors, that surely it can not be tolerated.

Cost of Houses.

THE following table reproduced from Housing for June 7, 1920, shows the cost of houses of different types included in lump-sum contracts for which tenders have been approved and examined at the Ministry of Health up to May 15, 1920. The contracts generally provide for variation according to rise or fall in wages or cost of materials. The cost of land, road making, and sewering is not included.

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[3] MONTHLY LABOR REVIEW for December, 1918, pp. 329-335.
[4] Idem, October, 1918, pp. 251-257.
[5] Idem, December, 1917, and June and October, 1918

COST OF APPROVED HOUSES, BY TYPE OF HOUSE.

[£1 at par=$4.8665.]

Cost as approved.	Nonparlor types.					Parlor types.				Total number of houses.
	Living room, scullery, and—				Average cost per house.	Parlor, living room, scullery, and—			Average cost per house.	
	1 bedroom.	2 bedrooms.	3 bedrooms.	4 bedrooms.		2 bedrooms.	3 bedrooms.	4 bedrooms.		
£500 and under	4	.....	134	.....	£442	.....	32	.....	£462	170
£501 to £600	.....	199	719	.....	571	13	174	.....	574	1,105
£601 to £700	.....	211	2,238	6	660	.....	640	2	674	3,127
£701 to £800	.....	183	6,026	3	761	.....	3,596	89	761	9,897
£801 to £900	.....	78	1,283	19	831	81	9,273	334	854	11,068
£901 and over	.....	5	149	.....	1,048	11	3,456	226	951	3,817
Total	4	706	10,549	28	732	105	17,171	651	845	29,214
	11,287					17,927				

The average cost per house of the 29,214 houses shown above is £801 ($3,898, par); that of the 11,287 houses without parlors is £732 ($3,562, par); and that of the 17,927 houses with parlors is £845 ($4,112, par).

Of the 29,214 houses, 22,926 were in urban districts and cost on the average £805 ($3,918, par) each, while 6,288 were in rural districts and cost on the average £797 ($3,879, par) each.

Finance.

EVERYWHERE the local authorities have been hampered by the lack of funds, and have shown a natural hesitancy to add further to the burden of the taxpayers, and therefore, owing to the difficulty of obtaining funds, very little building was undertaken during the autumn of 1919, even after the local authorities were given powers and responsibility by the passage of the housing act of July, 1919. Accordingly on October 31, 1919, the Treasury appointed a committee on housing finance to consider the steps to be taken by local authorities to facilitate the raising of capital to defray the cost of housing schemes.

The committee was of opinion that money could at present best be secured by the issue of short-term securities, and its recommendations were included in the housing (additional powers) act of December. Under this act the local authorities, with the consent of the minister of health, may issue local housing bonds, payable after five years, of the denomination of £5 ($24, par) and multiples thereof, which, according to a decision of the Treasury, shall bear interest at the rate of 6 per cent per annum. The campaign is now being carried on in nearly every town, and an attempt is being made to attract all classes of investors.

With regard to the bond issue Sir Herbert Morgan, a former official of the Government, expressed the opinion that local bonds are desirable, since each subscriber will be assured that his money is being used for the improvement of his own district, and his local patriotism will thus be aroused.

The point of view of labor, on the other hand, as given by Mr. G. D. H. Cole, of the advisory committee of the Labor Party, is that the financial obligations should have been assumed by the nation as a whole, since under the scheme of local finance the poorer districts will be at a disadvantage. It is contended that the poorer districts where the need is greatest will be precisely the districts where funds will not be available in sufficient amounts.

The housing bond campaign commenced in April, and has met with varying success in the several localities during the few weeks which it has covered in any region. But the Ministry of Health explains that immediate success in all districts was not anticipated, and that it was expected that ultimate success could only be achieved by persistent effort over a protracted period. Even now, however, some towns of moderate size have raised in the neighborhood of a half million pounds. The London campaign not having been started until June, is yet too young for the results to have become significant, but the indications are that the goal, £5,000,000 ($24,332,500, par), will be reached without difficulty, as one-tenth of this sum was subscribed within the first two weeks. The week of July 12–17 has been designated as "London housing bond week," and the preceding week will be given over to big meetings, at which prominent public men and women will endeavor to arouse a genuine public interest in the campaign.

Extent of Assistance and Control by the Government.

MR. E. G. CULPIN, an authority on housing and town planning, in the Bulletin of the Federation of British Industries of May 24, 1920, describes the working of a public utility society, designed to put through building schemes to assist in the present housing program. Regarding the part which the Government is prepared to take in financing a scheme he says:

> At the present time the Government lends 75 per cent of the approved cost of a scheme, including land, buildings, fees, etc., and the society has to find the other 25 per cent. The Government loan is for 50 years with interest at 6 per cent and a sinking fund of one-third of 1 per cent, making the total loan charges 6⅓ per cent per annum. To meet the high cost of building the Government will remit annually 30 per cent of the total loan charges, equivalent to a free grant of about one-third of the whole capital. To meet the very abnormal position at the present moment this is increased to 50 per cent until July, 1927, in order to enable a house to be let at a moderate sum, and the society to be run without loss.
>
> With these terms there is no difficulty whatever for a society in connection with any industrial works, cooperative organization or trades-union, all of which have funds at their back, to build houses, and it should be quite simple for any group of individuals to be able to provide their own houses, if they can each put up capital to the extent of £150 to £250.
>
> When building begins there is naturally a lot of work to attend to and the society will be well advised to arrange its finance in advance of its requirements. Although the Government promises 75 per cent of the approved cost and the Public Works Loan Board are empowered to advance this as the work goes on, there will necessarily be considerable delays, and it will not be possible to hold up the builder's certificates until something is received from the Government. In fact, if it is possible to do so, the total amount of the contract should be provided before the work is started, and this will be repaid as the Government installments come along. It must not be forgotten that these schemes are to all intents and purposes Government housing schemes, and every item is subject to the scrutiny of various Government officials. Any variation from what has been allowed may bring its penalty in the shape of a decreased allowance. The terms quoted are not fixed terms (they are the maximum allowed

under the act), and although there is every reason to believe that the Government will act generously in the matter, there will be swift retribution in the event of any extravagance being indulged in.

Rules and regulations are modified from time to time as experience shows this to be necessary, and in the complication of present-day building many concessions as to materials and design doubtless are imperative to reduce cost and to hasten results.

The ministry is still insisting upon sufficient light and air as prime requisites for houses. The detached or semidetached house is demanded whenever practicable, and the abolition of the cramped frontage and the consequent back projection is counseled in every case where building in groups seems advisable.

The regulations regarding location and arrangement of scullery, living room, and bath, and methods of heating and ventilating are such as are made necessary by the exigencies of English climate, or by the force of custom, and are naturally different from those required in the United States.

Some schemes for supplying heat and hot water from a central plant are being tried out, and in many instances an arrangement somewhat similar to a latrobe furnace is being used in fireplaces, to heat bedrooms above, as well as the living room below.

The Ministry of Health has issued a manual dealing with the preparation of State-aided housing schemes, and giving guidance for all stages, from the choice of the site, the lay-out plan and the density and distribution of the houses, the types and construction of roads and sewers, and the planning and design of the houses themselves.

Some annoyance is manifested with the delays and irritations arising from Government control Ways and Means (London) says, on this point:

> The would-be builder has not only to conform to all the requirements of the numerous parties which made his business harassing enough before the war, but he has also to submit to a mass of rules and regulations designed in response, strange as it may seem, to a national desire to get more houses.

And, doubtless, the devious way to be followed by the prospective builder is disconcerting. It begins with various committees set up by the local authority and leads through the building material supply department of the Board of Trade, to the Ministry of Health, the final authority. So long as the Government heavily subsidizes the project, however, such control would appear to be a necessity.

Work of Building Guilds.

IN MANCHESTER some of the construction work is to be done by the Manchester Building Guild. Its work has been held up for some months owing to difficulty over certain details of contract. The Ministry of Health is stated to have had a favorable attitude toward the building guild principle, but it insisted on an agreement on certain details of the contract before allowing the guild to proceed. The Guild's work has therefore been held up until such an agreement could be reached. It is now decided that the guild will give a definite estimate of cost for each type of house to be built, which must be approved by the local authority and the Ministry of Health. The guild will receive a lump sum of £40 ($195, par) per house, plus 6 per cent of the "prime cost" of the house.

In the event of the actual cost of a house proving less than the estimated cost, the actual cost only, plus the £40 and the 6 per cent overhead charges, will be paid by the local authority. The guild recognize and agree that in any case the 6 per cent for overhead charges should not be paid on any increase in the cost of materials taking place during the progress of the work, although for the purpose of determining whether the estimate has been exceeded or not, fluctuations in the standard rates of labor and prices of materials will be allowed for.

If the actual cost should prove to be more than the estimated cost, after the usual allowance for the fluctuation in wages rates and prices, the guild will receive the £40 as above, but the 6 per cent will not be payable on the amount of the extra cost.

Now that an agreement has been reached, the actual building of a large number of houses is expected to go ahead at full speed. The Cooperative Wholesale Society is to supply materials and the Cooperative Insurance Society is guaranteeing the ability of the Manchester Guild to complete its contracts.

A guild similar to the Manchester Guild is being formed in the London building trades, and it is likely that if the Manchester Guild is successful, the London organization will also be given some of the housing work in the London district.

Actual Progress of the Housing Work.

BY THE middle of June, 1920, the Ministry of Health had sanctioned building schemes upon sites representing a total area of 49,779 acres, and had further schemes under consideration covering 17,000 acres. Plans for 201,370 actual houses had been sanctioned and tenders for 112,658 houses had been approved. The number of houses actually completed is still relatively small, but the Government expresses the hope that 100,000 may be completed by the late autumn.

The following account of housing at Newbury is taken from the Monthly Circular for June of the Labor Research Department:

It will be interesting to see the accounts of the Newbury Housing Committee when they are complete. At present it seems that the parlor houses built by direct labor are going to cost roughly £700 each. The original estimate was £600, but since then the prices of building materials have risen considerably, and a private tender for the same houses would now work out at about £940. A hundred houses are included in the scheme, and for the four now on the point of completion the amount of expenditure on each is officially accepted at £684. The Newbury Council is the first in actually producing houses built by direct labor, and the success of its scheme is serving as an incentive to other councils who wanted tangible proof that the direct labor policy was practicable. One of the features of the Newbury scheme is that employment is given to the laborers on wet days by the making of concrete partitions, lintels and posts, and blocks for the inner lining of the hollow walls. In this way a 48-hour week can be guaranteed; and the men are working at top speed, the bricklayers laying over 600 bricks a day. The wages are slightly above the local rate, but no bonus on output is given. Conditions at Newbury are perhaps rather unusually favorable; bricks are produced close to the building site, and sand and gravel can be had for the digging. Moreover, the council own the gas works and provide the necessary breeze for concrete block making. But whatever the advantages of the particular district, it is clear that a saving of £200 per house on the local builders' charges is being effected. Banbury, Tonbridge, Chelmsford, and other towns have sent deputations to investigate the Newbury scheme, and have decided to adopt a similar one to meet their own needs. The Southgate Council has meanwhile had the satisfaction of opening the first three of the houses it has undertaken to build. The policy which has been followed here is described as "semidirect labor," that is to say, that separate contracts have been made with the various trades concerned in the building of a house, instead of making one contract for the whole. This has resulted in an evident saving of cost, but the nature of the scheme makes it difficult to ascertain the exact amount of expenditure on each house. The figure was first given as £690, but was later admitted to be £750.

It is encouraging in these times to hear that even one house has been actually built, and to hear that Newbury hopes to turn out four every month until 200 are completed.

Housing Shortage and Housing Measures in European Countries.[1]

Compiled by ALFRED MAYLANDER.

Spain.

NEWSPAPERS of all shades of political opinion are calling attention to the enormous rise in rents in Madrid, which are being doubled and even trebled. Legislation is urgently called for and the Government is being blamed for its apathy. Several bills have been introduced in the Chamber of Deputies, but according to speakers at a meeting of the Tenants' Association these bills do not sufficiently benefit the tenants. The association has drafted a scheme of its own which contains the following demands:[2] The profits of the landlord must be restricted, as in the case of maximum prices; guaranties must be established to protect tenants in general, and shopkeepers in particular; the sole causes for eviction should be nonpayment of rent and expiration of the lease, which, in the case of shopkeepers, should be of 30 years' duration.

A proposal has been laid before the Chamber by socialists, republicans, and two liberal leaders demanding a Government bill to restrict the rise in rent.

An architect supplies the following information as to the scarcity of housing accommodations in Madrid:[3]

> There is not a room to be had, and "To let" signs have completely disappeared from windows. When a flat becomes vacant, the janitor's lodge is besieged by applicants, who hold a regular auction of tips in order to obtain priority for their applications. Renting agents for houses, especially in the center of Madrid, receive the most tempting offers for their owners and for themselves. The writer then gives the following reasons for the increase of urban population: During the 10 years immediately preceding the war there was a slight check in the growth of cities, but since the war the increase of the population of large towns has developed to an extraordinary extent. The insecurity of life in the country, due to social unrest, and the scarcity there of certain necessaries of life, have caused an influx into populous towns. Barcelona and Madrid have each increased by some 200,000 inhabitants within the last few years, and similar phenomena are to be observed in Seville, Bilbao, and other provincial capitals.

In view of the urgent demand for remedial legislation the Permanent Parliamentary Commission of Justice has drafted a bill authorizing the Government to introduce provisionally certain reforms in the system of urban leases of private houses, flats, shops, business, and other premises.[4] The substance of the main provisions of the bill is as follows: Obligatory extension of leases, but without alteration of rent, in favor of the tenant who punctually pays his rent and performs his covenants; suppression of the landlord's right of summary eviction except in cases of nonpayment of rent, other cases to be submitted to a board of tenants to be constituted for this purpose; this board to be empowered to revise increases of rent imposed since November 1, 1914; the Government to be authorized to adopt measures to stop negotiations tending to raise the rents of unoccupied flats and, in addition, to pass special enactments for the leasing of new blocks

[1] This article has been compiled from the Economic Review (Review of the Foreign Press), London, issues of Mar. 31 to June 16, 1920. The original sources are shown here in footnotes.
[2] Sol. Madrid, Mar. 12, 1920.
[3] Sol. Madrid, Mar. 12, 1920.
[4] Epoca. Madrid, Apr. 3, 1920.

of dwellings, and for the rapid construction of houses, such provisions to include remission of such dues and taxes as it may deem fit, the authority granted by the bill to the Government to be in force until December 31, 1921.

Czecho-Slovakia.

IN view of the shortage of housing accommodations and the consequent tendency of landlords to demand unreasonably high rents the Czecho-Slovakian Government has introduced a new tenants' protective bill, to be in force from April 1, 1920, to December 31, 1921.[5] Its most important provisions are as follows:

Article 1 provides that notice to vacate can not be given to a tenant without the consent of the district court, and details reasons that would be considered valid for giving notice. Article 3 provides that the rent and other charges may not be raised by more than 20 per cent of the rent charged on August 1, 1914, without the approval of the rent office or the district court. Article 9 provides similar protection for the subtenant. Article 12 prohibits the landlord from making the purchase by the tenant of the fixtures a condition of the letting. Article 13 provides that the rent and other charges may only be paid in Czecho-Slovakian kronen currency. Article 14 prohibits outgoing tenants from demanding a premium from the new tenants, and also prohibits extortionate commissions on letting.

In incorporated towns and in communes with over 20,000 inhabitants housing boards will be established, and in other communes they may be established by decree of the town council.

Belgium.

IN Belgium many owners have evaded the provisions of the dwelling-house law of August 25, 1919, by selling their properties. The Belgian Government has introduced a bill extending the above law, and, in order to avoid hardships to tenants, a clause has now been added to the effect that change of ownership does not alter the terms of the tenant's lease. Under this bill, which was passed in May, it will be a punishable offense to increase house rent beyond the 30 per cent allowed by the Government, but the new measures are not applicable to newly built premises. People who have been forced to pay unreasonable rents will be able to have them revised. Premises to let must show the amount of rent asked on the "To let" signs, so as to prevent speculation. A clause providing for expropriation of empty premises will also be included in the new bill.[6]

House owners are protesting that the new bill will be most unjust. The cost of living has increased by 400 per cent, and the 30 per cent increase in rent allowed by the Government is quite insufficient to compensate them for losses suffered during the war, for the cost of raw material, which is five or six times higher than formerly, and for increased wages. They demand a thorough inquiry into existing conditions, and incidentally point out that the Government has done nothing to oppose the pulling down of rows of houses for theaters, moving-picture shows, and dance halls, and has taken no action to

[5] Prager Tagblatt. Prague, Mar. 26, 1920. Evening edition.
[6] Handelsblad van Antwerp. Antwerp, Apr. 20 and May 5, 1920.

prevent the raising of rent by foreign purchasers, who, taking advantage of the low rate of exchange, buy up houses and let them at fabulous prices.

In order to accelerate the reconstruction of the southern district of West Flanders, where 20,000 houses and public buildings have to be erected, the Supreme Royal Committee of this district has issued a circular to Belgian architects inviting them to cooperate in the rehabilitation of the devastated area. The minister of the interior has offered to have the houses of those who have suffered in the war rebuilt at the State's expense, on condition that such persons sign a contract renouncing all rights to indemnities with regard to these premises. An advisory committee will draw up a list of accredited architects. The owners can choose their own architects, and the State will bear all expenses; the plans must be submitted to the Supreme Royal Committee, which reserves the right to reject or revise the projects. A technical bureau will exercise the necessary control.[7]

The Government has also sanctioned the establishment of a national company for cheap houses. The chief aims of this company will be (1) to establish local organizations for cheap houses, and (2) to grant credits to these local organizations.[8]

Netherlands.

A CENSUS of dwellings recently taken in Amsterdam indicates that there is an alarming housing shortage in the Netherlands. This census showed the following results:[9]

During 1919 the total number of premises was 142,073, including 128,047 private dwelling houses, and 14,026 dwelling houses with shops. Only 471 houses, or 0.3 per cent, were vacant. Of these only 3 were to let; 38 were under repair; 15 had been left vacant by the owners for unknown reasons; 127 were for sale; and 288 were let, but the tenants had not yet taken possession. About 8,311 premises were occupied by two families, 383 by three, 50 by four, and 15 by five families; 13,492 people lived in apartments, and 11,671 were lodgers.

As far back as 1913 the increase of new houses was inadequate for the increased population. During the war private building enterprise stopped entirely, with the result that housing accommodation became very scarce and rents rose phenomenally. The Government took steps to alleviate the situation by expropriation laws and by giving facilities for repaying grants, etc. Between 1913 and 1919 the municipalities and a number of building societies disbursed a total of 104,000,000 florins ($41,808,000, par) in Government building subsidies. In addition to this the Chamber of Deputies appropriated 15,000,000 florins ($6,030,000, par) for emergency buildings. The four new proposals recently submitted to the Chamber of Deputies, relating to the extension of leases, to revisions of the rent board act, to the dwelling-house emergency act, and to the act concerning inhabited premises, will further assist in alleviating the situation. It is generally feared, however, that although speculation in houses will henceforth be

[7] Handelsblad van Antwerp. Antwerp, May 2, 1920.
[8] Idem, Mar. 31, 1920.
[9] Rotterdamsche Courant. Rotterdam, Apr. 14, 1920. Evening edition.

stopped, the actual housing crisis will not be removed. The Government aims at returning to normal conditions by restoring unrestricted free trade and by trying to reduce subsidies.

Switzerland.

THE Swiss Congress for Trade and Industry petitioned the Government to allow funds obtained for the erection of workmen's dwellings to be exempt from the war profits tax. The committee of Government experts appointed to examine the war profits tax was unable to grant this request but has proposed a compromise on the following lines:[10]

1. Only moneys received by public welfare institutions for the erection of workmen's dwellings, i. e., payments made by manufacturers to such building funds in form of a donation, will be exempt from the war profits. The buildings in such cases will belong, not to the manufacturers, but to the public welfare institutions, as well as all income derived from rent, etc. On the other hand, the manufacturer supplying the capital may stipulate that as long as his establishment continues to be in operation and is not in liquidation these dwellings must be placed at the disposal of his employees.

2. Manufacturers desirous of building for themselves will be allowed to write off 50 per cent of the cost of building, including the value of the site, which amount will be exempt from the tax. This corresponds to a State contribution of 20 per cent toward the building.

3. If a manufacturer holds shares in cooperative building societies, he will be permitted to write off 50 per cent of the shares as exempt from the tax.

4. A manufacturer participating in cooperative building societies by guaranteeing certain sums covered by mortgages will be permitted to write off as exempt from the tax a sum proportionate to the interest on the mortgage. Thus, a 15 year 3 per cent mortgage would entitle him to write off 50 per cent.

Sweden.

A GOVERNMENT bill dealing with the housing shortage has been introduced in the Swedish Riksdag.[11] The principal features of this bill may be summarized as follows:

The normal annual output is estimated at 24,000 rooms, but at present it is impossible to rely on private enterprise for production to such an extent. In the course of a period of five years it is proposed to increase the normal annual construction of 24,000 rooms to 40,000 rooms with the aid of State funds. A further 5,000 rooms will be provided direct by the State for the use of its employees. At a cost of 6,000 crowns ($1,608, par) per room this will involve a total expenditure of 270,000,000 crowns ($72,360,000, par).

As regards State building grants to the local authorities, a provisional arrangement is suggested whereby a special fund should be set aside as the State housing loan fund, which would be increased by degrees to a maximum of 100,000,000 crowns ($26,800,000, par). One of the conditions of the grant is that the builder should raise

[10] Basler Nachrichten. Basel, Mar. 23, 1920.
[11] Svensk Handelstidning. Stockholm, Mar. 23, 1920.

capital to cover 50 per cent of the costs of construction, apart from ground values. When the builder is a private person, company, or society, a mortgage of 50 per cent would be raised, accompanied by the guaranty of the local authorities, as security for the State. The loan would be valid for 20 years and could be prolonged after that period, but not longer than until the year 1958. A loan is, however, not considered sufficient, and direct subsidies are also contemplated.

The results of an investigation of the rise in rents in Stockholm have been published by the Swedish statistical office.[12] The inquiry covered about 87,000 dwellings, of which 8,000 were provided with central heating. The following table shows the per cent of increase in rents charged at the end of 1919 over those prevailing at the end of 1914 and 1918.

AVERAGE ANNUAL RENTS FOR DWELLINGS OF VARIOUS SIZES PREVAILING IN STOCKHOLM ON DEC. 31, 1919, AND PER CENT OF INCREASE OVER THOSE PREVAILING ON DEC. 31, 1914 AND 1918.

[1 crown at par=26.8 cents.]

Size of dwelling.	Annual rent Dec. 31, 1919.	Per cent increase over—	
		Dec. 31, 1914.	Dec. 31, 1918.
	Crowns.		
1 room	271	27.8	9.3
1 room and kitchen	412	27.2	10.2
2 rooms and kitchen	648	25.8	9.3
3 rooms and kitchen	982	28.5	10.1
4 rooms and kitchen	1,339	33.0	11.5
5 rooms and kitchen	1,765	33.7	11.8
6 rooms and kitchen	2,288	32.3	9.9
Average per room, including kitchen	253	29.1	10.0

Norway.

IN Norway a State subsidy of 5,000,000 crowns ($1,340,000, par) was granted for housing purposes, on condition that the local and municipal authorities contribute a corresponding sum. The matter is in the hands of the Ministry for Social Welfare.[13]

The Housing Committee has approved a proposal for the erection of workmen's dwellings in the environs of Christiania. The estimated cost is 1,860,000 crowns ($498,480, par), of which the corporation will pay out about 930,000 crowns ($249,240, par) for the purchase of sites and building materials. A peculiarity of the scheme is that the prospective tenants will be asked to cooperate by taking part in the actual building operations instead of by investing capital.[14]

Finland.

THE results of the housing census taken in Finland on April 25, 1919, show that in general overcrowding is worse in the suburbs of towns than in the towns themselves, except in Helsingfors.[15] In Helsingfors the unoccupied dwellings constitute only 0.5 per cent of the total; in the towns with a population of under 3,000 they form

[12] Stockholms Tidningen. Stockholm, Apr. 10, 1920.
[13] Aftenposten. Christiania, Mar. 21, 1920.
[14] Idem., Mar. 30, 1920.
[15] Hufvudstadsbladet. Helsingfors, Mar. 7, 1920.

2.8 per cent. The Finnish Diet recently granted 20,000,000 Finnish marks ($3,860,000, par) to relieve the shortage of dwellings in the towns. The conditions for obtaining subsidies were later to be determined by the Government. The Ministry for Social Welfare has now prepared its scheme, and this will immediately be considered by the Government.[16] According to this scheme, which will, it appears certain, be approved, subsidies in the form of interest-free loans will be granted to: 1. Communes which themselves intend to erect dwellings; 2. Cooperative building societies or associations, which in accordance with their by-laws do not distribute more than 6 per cent interest to their shareholders, and on whose board of directors the commune has a majority of votes.

Subsidies will be granted only for such building enterprises as were commenced after January 1, 1919, and are completed at the latest by October 15, 1921. The dwellings concerned consist mainly of one room and kitchen. The commune must further pledge itself to grant to such cooperative societies or associations building sites free of ground rent on a lease of at least 50 years, and, in addition, an interest-free loan corresponding to 15 per cent of the building costs on the same conditions as the State's interest-free loans. The subsidies of the State in the form of interest-free loans amount to 30 per cent of the building costs, and the State pledges itself not to call these loans until 10 years have elapsed. At the expiration of this period the buildings will be valued, and the State pledges itself to write off two-thirds of the building costs which then are not yielding interest, whereupon a new amortization deed will be drawn bearing at most 3 per cent interest, and providing for amortization within 20 years. The commune is at liberty to write off in the same way the remaining one-third and to make a new mortgage with the same rate of interest and period of amortization.

With respect to rents of houses erected by cooperative building societies and associations, it is to be enacted that the representatives of the commune shall have the right of determining the rent. The commune, moreover, will be entitled, in the event of the sale of a house erected with the assistance of the State, to redeem the building at the original cost of building in accordance with which the State's subsidy has been computed. The houses are to be of the so-called standard type, and built so solidly that they will be inhabitable for at least 50 years. Plans must be annexed to applications for subsidies and the Ministry for Social Welfare reserves to itself the right to make any necessary alterations before giving approval. It is further stipulated in the scheme that the workers to whom the houses will be allotted are to be, as far as possible, residents of the district.

According to the scheme only the communes and certain cooperative building societies and associations can benefit by the State's subsidies. Of the whole building costs, the commune, if it itself undertakes the work of construction, will be granted 30 per cent in an interest-free loan. The commune is entitled to grant the remaining 70 per cent. A cooperative building society or association receives 30 per cent in State aid, and 15 per cent from the commune, or in all 45 per cent. Of the remainder (55 per cent), 60 per cent may be raised by a mortgage; 30 per cent the Ministry for Social Welfare proposes that

[16] Åbo Underrattelser. Åbo, Apr. 8, 1920.

the commune should grant as a loan under a second mortgage. The society or association can raise the remaining 10 per cent by subscriptions or the sale of shares.

France.

M. LOUCHER, president of the committee appointed under the French Ministry of Hygiene to study measures to alleviate the housing shortage, has drawn up a report for submission to the National Assembly which provides for the construction, within 10 years, of 500,000 new dwellings.[17]

The report states that the law of October 24, 1919, would have to be remodeled in order to facilitate the new plans. Under these plans the loans by the Deposit and Consignment Office would be allowed to reach 80 per cent of the costs of construction instead of 50 per cent, and would be repayable within 40 instead of 25 years. All abandoned constructions, for which the funds for completion could not be supplied by the Contractors' Bureau or the Crédit Foncier, would be requisitioned for the benefit of the associations or towns concerned. Fifty thousand dwellings a year would be built, and a good proportion reserved primarily for large families. The cost of the undertaking would amount to 7,500,000,000 francs ($1,447,500,000, par), and would be supplied by the issue of special debentures. The funds obtained would be placed at the disposal of the building offices or private companies at a rate of interest not exceeding 3 per cent. The Departments and communes would be asked to furnish building sites or provide labor for the foundation works. The cost to the State would be 22,500,000 francs ($4,342,500, par) in the first year, and 225,000,000 francs ($43,425,000, par) in 1930. Possibly the State would have to raise the necessary funds by putting a tax of 1 per cent on employers' wage disbursements. As regards labor and material, since the war and the 8-hour day have diminished by 40 per cent the output and working time of building trades' workers, it would be necessary to resort to foreign labor.

Germany.

EVEN before the war Germany had suffered from a serious shortage of housing accommodations. During the war the problem became still more acute because all building activities, except for military purposes, ceased entirely. The fact that during the entire war rents remained at prewar levels was due to the enactment of drastic emergency laws against rent profiteering and the establishment of rent arbitration boards in all communities.

Recent Government Measures.

Of more recent Government measures there should be mentioned a decree issued in March by the National Ministry of Labor and directed against rent profiteering.[18] It provides that a fine not exceeding 10,000 marks ($2,380, par) may be imposed upon persons who by advertisement or other public announcement (1) Offer rewards for information concerning premises to let or for the con-

[17] Journal des Débats. Paris, Mar. 28, 1920.
[18] Kölnische Zeitung. Cologne, Mar. 13, 1920. Morning edition.

clusion of leases; (2) offer to let premises under a covering address (letters of the alphabet, box number, and the like); (3) offer to let premises to the highest bidder; (4) offer to let premises on condition that the furniture, etc., in them is taken over simultaneously.

The same penalty is to be imposed upon persons who, on giving information or acting as agents with regard to lettable premises, receive higher fees than those fixed by the communal authorities for transactions of this nature.

A bill containing measures for the relief of the housing shortage was passed by the German National Assembly on May 11, 1920. Its principal provisions are as follows:[19]

The existing legal regulations relating to the alleviation of the housing shortage are to remain in force. The central provincial authorities may empower or require the communes to take suitable measures or may themselves take such measures or transfer their authority to some subordinate body. In the case of extraordinary abuses the central provincial authorities may, with the sanction of the national minister of labor, authorize or require the communal authorities to take other measures in addition to those contained in existing orders and decrees, e. g., to encroach on the freedom of migration and the inviolability of property and of dwellings, or they may transfer the authority to do so to their subordinate authorities. Questions relating to compensation may, with the approval of the minister of labor, be settled out of court. Also, the new bill authorizes direct police intervention to enforce the regulations designed to combat the housing shortage. The maximum fines for contravention of these regulations are increased from 1,000 marks to 10,000 marks ($238 to $2,380, par).

With regard to the letting of furnished rooms the bill contains the following provisions:

The amount of the rent and the remuneration for subsidiary services of every description are subject to the sanction of the communal authorities. In Greater Berlin, maximum rents are to be based on the value of the empty room, which is found by dividing the rent paid for the whole dwelling by the number of rooms, plus 15 per cent of the original cost of the furniture in the room, from 25 to 30 marks ($5.95 to $7.14, par) per month for attendance, etc., and from 5 marks ($1.19, par) upward for light. A reasonable fee may be charged for bed linen, towels, bath, etc.

Costs of Building.

According to Soziale Praxis,[20] at the present time building operations present almost insuperable difficulties. The cost of small dwellings has risen from 13 to 17 marks ($3.09 to $4.05, par) per cubic meter (35.31 cubic feet) before the war to 80 to 90 marks ($19.04 and $21.42, par) in September and October, 1919, when the last subsidy was granted, and to-day a cost of 180 to 200 marks ($42.84 to $47.60, par) has to be considered.

[19] Frankfurter Zeitung. Frankfort on the Main, Apr. 22, 1920. Deutsche Allgemeine Zeitung. Berlin, May 20, 1920.
[20] Soziale Praxis und Archiv fur Volkswohlfahrt. Berlin, May 5, 1920.

Socialization of the German Building Trades.

The operatives in the German building trades are making strenuous efforts to amalgamate the various organizations in these trades in a federation which would include both manual and brain workers in all the numerous branches, e. g., civil engineering, building materials' manufacture, building, installation of heating plant, lighting and water supply, stonemasons, bricklayers, plasterers, carpenters, painters, chimney sweeps, etc.[21]

The Congress of Building Operatives recently held in Karlsruhe, after detailed discussion of this project, unanimously decided in its favor. With respect to the question of socialization, it was pointed out that the present method of production could not possibly solve the housing problem, as Government and communes had neither the strength nor the desire to act energetically. It was decided to found an association for socialized building undertakings and, until State aid is forthcoming, to employ 5,000,000 marks ($1,190,000, par) of the capital of the Building Operatives' Association for this purpose. As to the housing question, stress was laid on the need for the trade-unions to pursue not only a wage policy but a production policy. A demand was made for the creation of a responsible central authority, which should be empowered to carry out the immediate socialization of cement, lime, and other building materials, and to prohibit the pulling down of old buildings. A Social Building Society for Hesse and Hesse-Nassau was created which is to be financed by contributions. In addition, all the building operatives in this district will contribute a day's wage for this cause.

Slump in the Real Estate Market.

The economic impossibility of a resumption of building activity has brought business in the real estate market to a complete standstill. As an illustration of the gravity of the situation the Deutsche Allgemeine Zeitung (May 27, 1920) states that the Real Estate Trading Co. (*Handelsgesellschaft für Grundbesitz*), whose balance sheet at the end of the last financial year showed a loss of 4,618,650 marks, reports that the deficit has increased to 5,500,000 marks ($1,099,238.70 to $1,309,000 par), or half the entire capital stock.

Austria.

THE Austrian State credit for meeting the housing shortage has recently been increased by 3,000,000 crowns ($609,000 at par), making altogether 13,000,000 crowns ($2,639,000, par), which, with the contributions from the communes, brings up the actual expenditure to at least 20,000,000 crowns ($4,060,000, par). The increase in wages and cost of materials has led to an expenditure which greatly exceeds the estimated cost of building, and a large part of this increase must be borne by the State.[22]

[21] Frankfurter Zeitung. Frankfort on the Main, May 26, 1920.
[22] Reichspost. Vienna, Apr. 18, 1920.

Hungary.

A RECENT Hungarian decree regulating rents for dwellings distinguishes between the actual rent increase and the amount which the tenant has to pay through the landlord to the Budapest municpality in consequence of the increased water rate and the charges for carting away refuse.[23]

Under the latter head every tenant in Budapest from May 1, 1920, has to pay to the landlord a 20 per cent increase on the present rent, the first quarterly payment being payable at the latest by the end of May. This charge is not to be considered as rent, either as regards taxation or rent increase. Independently of this charge, from August 1, 1920, the decree permits an increase of rent, but in the case of small dwellings whose yearly rent does not exceed 4,000 crowns ($812, par), the resulting rent must not be more than 30 per cent above the rent charged on November 1, 1917. In the case of dwellings whose rentals exceed 4,000 crowns ($812, par) per year and in the case of business premises, the landlord and the tenant are free to come to an agreement as to the rent, but the tenant possesses the right of appeal to the housing authorities against an excessive increase.

In the rural districts, where the water rate and refuse removal charges do not exist, dwellings consisting of not more than four rooms are considered as small dwellings, and an increase of not more than 35 per cent is permissible from August 1, 1920, while the provisions as to larger dwellings and business premises are the same as in the capital. The rent of small dwellings tenanted by civil or military pensioners or by widows of civil or military public officials may not be increased, but the 20 per cent increase charged in Budapest is to be paid by these also. In special circumstances a higher rent increase may be demanded subject to the approval of the housing authorities.

The decree further regulates the rent of furnished rooms, of summer apartments elsewhere than in summer resorts, etc.

In view of the difficult circumstances of civil servants, the Government has decided to raise the allowances for rent of Government, municipal, railway, and military public officials in Budapest from May 1, 1920, by 20 per cent, and from August 1, 1920, by 50 per cent in all, and in the country by 35 per cent from August 1, while widows of officials and pensioned officials in Budapest will receive a 20 per cent increase of the housing allowance from May 1.

[23] Pester Lloyd. Budapest, May 1, 1920.

LABOR ORGANIZATIONS.

Fortieth Convention of the American Federation of Labor.

THE American Federation of Labor met in annual convention for the fortieth time at Montreal, Canada, on June 7, 1920. The constructive demands of the Federation as set forth by its executive council and indorsed by the convention are as follows:

Industry to-day requires these remedial measures:

It requires greater democracy in order to give to the workers full voice in assisting in its direction.

It requires more intelligent management and acceptance of the principle that production is for use and not for profit alone.

It requires full and free acceptance and use of the best that invention has to offer.

It requires bold and audacious reconstruction of method and process in the conduct of basic industries.

Labor does not oppose introduction of improved methods in industry. It courts and encourages improvements in processes and in machinery. What it will always resist is the introduction of these processes and this machinery at the expense of the workers.

There is a knowledge of industry among the workers in industry of which society has not begun to avail itself. The effort has been to suppress use of that knowledge and to demean those who possess it. The workers know their work as none but the workers can know it. The shoemaker knows his last and the engineer understands the capacity of his engine.

The workers are appalled at the waste and ignorance of management, but they are too frequently denied the chance to offer their knowledge for use.

They decline to be enslaved by the use of their own knowledge and they can not give of it freely or effectively except as equals in industry, with all of the rights and privileges and with all of the stature and standing of employers.

Adoption of the principle of voluntary effort, of full cooperation in industry, will bring to the industrial life of the Nation such an impetus that production will cease forever to be a problem in American life.

Adoption of the principles we here urge will inevitably result in a rapid decrease of the number of nonproducers who at present live by fastening themselves in one useless capacity or another upon the industrial life of the country. Proper absorption of nonproducers into useful channels would be but a simple problem.

The welfare of the workers must be a paramount consideration. There can be no progress and no gain in production volume if there is not such consideration. But a greater mutuality in industry would insure proper safeguarding of the rights of workers.

Only by such methods and under such principles can there be an advance in production which does not penalize the worker for his own industriousness and for his own alertness and inventiveness.

Autocratic industry kills incentive. It punishes brilliancy of attainment. It warps the mind and drains the energy from the body. We have repeatedly condemned the principle of autocratic control of industry, and we now declare that short of its complete removal from our industrial life there is no industrial salvation and no hope of abundance in our time.

We urge the setting up of conference boards of organized workers and employers, thoroughly voluntary in character and in thorough accord with our trade-union organizations, as means of promoting the democracy of industry through development of cooperative effort. We point out to employers the fact that industry, which is the life blood of our civilization, can not be made the plaything and the pawn of a few who by chance to-day hold control. Industry is the thing by which all must live, and it must be given the opportunity to function at its best.

Labor turnover is but one of the evils which will disappear in proportion as the workers are given voice in management. This is proven by statistics which show the lowest turnover in those industries where the workers exercise the most effective voice by reason of the highest degree of organization.

We propose the salvation of industry. We propose the means whereby the world may be fed and clothed and housed and given happiness. We have service to give, and if permitted to give freely and on terms of manhood and equality we will give in abundance. We can not be driven as slaves, but we can give mighty service in a common effort of humankind.

Resolutions.

THE most contentious issue fought out on the floor of the convention during its 12 days' session was the question of Government ownership of the railroads. The resolution in favor of Government ownership and democratic operation, which was passed by a vote of 29,058 to 8,348, is as follows:

Resolved, That the Fortieth Annual Convention of the American Federation of Labor go on record as indorsing the movement to bring about a return of the systems of transportation to Government ownership and democratic operation; and be it further

Resolved, That the executive council be, and are hereby, instructed to use every effort to have the transportation act of 1920 repealed and legislation enacted providing for Government ownership and democratic operation of the railroad systems and necessary inland waterways.

President Gompers, opposing the resolution, said: "If I were in a minority of one, I should want to cast my vote so that the men of labor shall not willingly enslave themselves to Government authority in their industrial capacity."

The question of the admission of colored workers to organizations affiliated with the Federation again came before the convention. This time the question arose over the "white only" clause in the constitution of the Brotherhood of Railway Clerks. In spite of the protest of the railway clerks that the question would be properly handled by their organization, the convention adopted a resolution requesting the brotherhood to eliminate the words "white only" in its constitution and to admit colored workers within its jurisdiction to full membership. More than 100 of the 110 national and international organizations affiliated with the Federation now admit colored workers to membership.

The convention indorsed the covenant of the League of Nations without reservations. "It is not a perfect document and perfection is not claimed for it. It provides the best machinery yet devised for the prevention of war. It places human relations upon a new basis and endeavors to enthrone right and justice instead of strength and might as the arbiter of international destinies."

Other resolutions adopted by the convention may be summarized as follows:

Compulsory military training and military training in schools were condemned as "unnecessary, undesirable, and un-American."

Public officers were urged to make all possible effort to release political prisoners.

The Kansas court of industrial relations was condemned and its abolition urged. Four resolutions on this subject were referred to

the executive council of the Federation for action in bringing about the repeal of the law involved.

Congress was enjoined to enact immediately the legislation necessary to establish the United States Employment Service as a permanent bureau in the Department of Labor.

The creation of a Federal compensation insurance fund for maritime workers, under the administration of a Federal or State compensation commission, was urged to offset the recent decision of the United States Supreme Court denying longshoremen the benefits of State workmen's compensation laws.

Reclassification of the civil service was advocated and the adoption of a wage scale commensurate with the "skill, training, and responsibility involved in the work performed." Enactment of legislation granting civil-service employees the right to a hearing and to an appeal from judgment in case of demotion or dismissal was also urged.

The nonpartisan political campaign inaugurated by the Federation at its Atlantic City convention in 1919 to defeat candidates for office "hostile to the trade-union movement" and "elect candidates who can be relied upon to support measures favorable to labor," was indorsed. A fund of $29,545.42 was donated to the campaign committee by members of the Federation between February 24, 1920, and April 30, 1920.

Repeal of the Lever law and of the espionage act and other wartime legislation was demanded. Legislation against profiteering, in support of the Women's Bureau and of a Federal housing program was advocated, and the strengthening of the Department of Labor was urged.

Continued organization of the steel industry and particular attention to organization of laundry workers and telephone operators were ordered.

The Nolan minimum-wage bill (H. R. 5726), providing a minimum wage of $3 a day for Federal employees, was approved.

The secession movement of the "outlaw" railway unions was condemned.

The convention adopted a resolution in favor of the independence of Ireland and voted against recognition of the Soviet Government.

Cooperation between labor unions and the farmers was advocated.

A committee was appointed to report upon the question of health insurance to the 1921 convention of the Federation.

On the question of Asiatic immigration, the convention concurred in the resolution proposed by the Building Trades Council of California urging upon Congress: "First, cancellation of the 'gentlemen's agreement;' second, exclusion of 'picture brides' by action of our Government; third, absolute exclusion of Japanese, with other Asiatics, as immigrants; fourth, confirmation and legalization of the principle that Asiatics shall be forever barred from American citizenship; fifth, amendment of section 1 of Article XIV of the Federal Constitution, providing that no child born in the United States of Asiatic or Oriental parents shall be eligible to American citizenship unless both parents are eligible for such citizenship."

The employment of alien labor on the Panama Canal was protested.

Fullest support was pledged to "reestablish the rights of free speech, free press, and free assemblage," wherever denied.

A congressional investigation into conditions in the West Virginia coal fields was asked.

Congress was urged to make adequate provision for World War veterans.

Relief for the people of Austria, Serbia, Armenia, and neighboring countries was urged.

Statistics of Membership and Benefits.

MEMBERSHIP in the American Federation of Labor has passed the four million mark. The paid-up and reported membership of affiliated unions for the year ending April 30, 1920, was 4,078,740. This number does not include the 207,065 members of the national organizations at present suspended from the Federation, nor does it include the membership of those railway brotherhoods partially affiliated. The membership of the Federation in 1920 represents an increase of 109.6 per cent over the membership in 1915, when it was 1,946,347.

There are 36,741 local unions in the 110 national and international unions directly affiliated with the Federation in addition to the 1,286 local trade and federal labor unions, which are similarly affiliated.

The strike benefits paid by the Federation to local trade and federal unions for the year ending April 30, 1920, totaled $67,912.95. A total of $3,213,406.30 in death benefits, $937,219.25 in sick benefits, and $65,026.42 in unemployed benefits, was paid during the same period by affiliated international organizations. These figures do not include the benefits paid by local unions, many of which provide death, sick, and out-of-work benefits, and therefore represent but a small proportion of the aggregate sum paid by trade unions for these purposes.

The officers elected at this convention for the ensuing year are as follows:

President, Samuel Gompers (cigar makers).
First vice president, James Duncan (granite cutters).
Second vice president, Joseph F. Valentine (molders).
Third vice president, Frank Duffy (carpenters).
Fourth vice president, William Green (mine workers).
Fifth vice president, W. D. Mahon (street railways).
Sixth vice president, T. A. Rickert (garment workers).
Seventh vice president, Jacob Fischer (barbers).
Eighth vice president, Matthew Woll (glass-bottle blowers).
Secretary, Frank Morrison.
Treasurer, Daniel J. Tobin.

The 1921 convention of the American Federation of Labor will be held in Denver, Colo.

Labor Organization in Canada in 1919.

THE ninth annual report on labor organization in Canada for the calendar year 1919, published by the Department of Labor, states that the total membership of the 99 national organizations operating in the Dominion was 260,247, an increase for the year 1919 of 58,815, comprising 2,309 local branches. Including all

classes of trade unions the report gives a total membership in Canada of 378,047, distributed as follows:

	Branches.	Membership.
International	2,309	260,247
Noninternational	325	33,372
Independents	29	8,278
National Catholic	83	35,000
One Big Union	101	41,150
Total	2,847	378,047

These figures represent an increase over 1918 of 573 branches and 129,160 members. The percentage distribution of the total members for 1919, by trade groups, was as follows:

	Per cent.
Railroad employees	23.45
Metal trades	11.05
Building trades	10.58
Public employees, personal service, and amusement trades	6.69
Other transportation and navigation trades	6.33
Clothing, boot and shoe trades	5.48
Mining and quarrying	4.59
Printing trades	2.44
All other trades and general laborers [1]	29.38

It will be seen from the table giving total membership that the bulk of the organized workers in the Dominion are connected with international organizations whose jurisdiction covers the whole of the North American continent. The following table contains the names of 18 international unions, each having 5,000 or more members in Canada in 1919.

MEMBERSHIP IN CANADA OF 18 INTERNATIONAL UNIONS.

Name of organization.	Number of Canadian local units.	Reported membership of all units in Canada.
American Federation of Labor	65	5,421
Boilermakers and Iron Shipbuilders, International Brotherhood of	51	8,123
Bricklayers, Masons and Plasters' International Union	49	7,600
Carpenters and Joiners of America, United Brotherhood of	142	16,496
Clothing Workers, Amalgamated	13	9,500
Electrical Workers, International Brotherhood of	55	5,371
Locomotive Engineers, Brotherhood of	97	5,429
Locomotive Firemen and Enginemen, Brotherhood of	97	8,373
Machinists, International Association of	111	17,800
Maintenance-of-Way Employees, United Brotherhood of	178	15,000
Mine Workers of America, United	74	15,000
Pulp, Sulphite and Paper Mill Workers, International Brotherhood of	25	5,000
Railroad Telegraphers, Order of	12	6,250
Railroad Trainmen, Brotherhood of	89	13,506
Railway Carmen of America, Brotherhood of	103	12,644
Railway and Steamship Clerks, Brotherhood of	46	9,206
Street and Electric Railway Employees, Amalgamated Association of	30	7,000
Typographical Union, International	54	5,136
Total	1,291	172,855

A section of the report is devoted to a statement of the benefits paid by trade-unions, both the international group and the local branch unions in Canada. Of the 99 international organizations operating in the Dominion, 75 have benefit features of a varying nature. The total expenditures by these international organizations

[1] The report states that owing to incomplete reports from a considerable number of unions and from the One Big Union the larger part of their membership is included in this group, thus making the proportion unduly large.

amounted to $15,550,052, a decrease of $1,252,040 as compared with 1918. The distribution of these benefits was as follows:

Death	$10,436,671
Unemployed and traveling	298,902
Strike	1,789,961
Sick and accident	1,828,218
Old age pensions and other benefits	1,196,300
Total	15,550,052

The local branch unions in Canada expended a total of $583,093 in benefits, the largest amount, $198,438, or 34 per cent, being for strike benefits. The total amount was an increase of $151,589, or 35.1 per cent over 1918.

The report gives a brief history of the One Big Union movement and of the activities of the I. W. W. There is a summary of the work of the British Trade-Union Congress, of the Western Canada Labor Conference, and of the Trades and Labor Congress of Canada, and a chapter is devoted to an account of the organization of the new International Federation of Trade Unions. Efforts to avoid jurisdictional disputes are noted and the details of the scheme for the adjustment of disputes in the building industry, the agreement between railroad organizations, and the plan for the organization of a conference council for the printing trades are included. Attention is also given to the activities of district councils and of trades and labor councils in the Dominion.

First Meeting of Executive Committee of International Federation of Trade Unions.

THE executive committee of the International Federation of Trade-Unions, which was elected by the conference held last year at Amsterdam,[1] was in session in that city from April 8 to 10, 1920.[2] In addition to Jouhaux, Appleton, Mertens, Fimmen, and Oudegeest, the members of the committee, there were also present Dumoulin (France), Dürr (Switzerland), Ole Lian (Norway), Tayerle (Czecho-Slovakia), and Williams (England). Germany and Italy were not represented owing to the fact that the Dutch authorities had refused to visé the passports of Legien and the Italian representative.

In discussing the attitude of the labor delegates at the international labor conference at Washington, the meeting was of the opinion that these delegates showed a lack of solidarity. This opinion found expression in the following resolution proposed by Dürr (Switzerland):

> With respect to the report of the executive committee of the Federation on the Washington conference the meeting expresses the well-considered opinion that it is unsuitable that the labor delegates to international labor conferences take there an attitude differing from that of the International Trade-Union Federation. The executive committee demands of all labor delegates to future conferences that they assume a compact and solidary attitude.

[1] For an account of the organization of the federation, see MONTHLY LABOR REVIEW for December, 1920, pp. 359–365.
[2] Die Gewerkschaft. Vienna, May 25, 1920.

Albert Thomas, the director of the International Labor Bureau, who in passing through Holland had stopped off at Amsterdam, was invited to attend the meeting. The executive committee of the federation discussed with him the future relations between the federation and the International Labor Bureau and assured him of the fullest cooperation of the federation.

The executive committee resolved to hold next summer in Rome an international congress of agricultural workers' organizations, at which the problem of emigration shall be discussed. All countries interested in this problem will be invited to attend the congress.

The vote taken on the affiliation of the central labor organizations of South Africa and Greece with the federation was in the affirmative. The application of the Federation of German Trade-Unions of Czecho-Slovakia for affiliation with the International Federation was declined in accordance with a provision of the by-laws of the federation which stipulates that only one central organization of each country may be allowed to affiliate with it. The meeting resolved, however, to send a delegation into Czecho-Slovakia which shall attempt to bring about an approachment between the Czech and German trade-unions. The meeting declared national unity to be indispensable, but at the same time admonished national majorities to give due consideration to the demands of national minorities. It advised the Czechs to grant broad autonomy to the German groups in Czecho-Slovakia, which advice the Czech delegate seemed inclined to heed.

A lengthy discussion of conditions in Russia ended in a resolution that Jouhaux and one of the secretaries of the federation should accompany into Russia the delegation of the International Labor Council. In the meantime everything should be done to prevent military action against Russia. The executive committee declared it would request the labor organizations of all countries to follow the example of the French seamen and refuse to transport munitions to Russia.

A thorough discussion of European economic conditions led to the conclusion that international distribution of raw materials and internationalization of credit would be the best means for the economic rehabilitation of Europe. The meeting instructed the executive committee to make representations in this sense to the Supreme Council of the League of Nations.

Finally, the meeting occupied itself with the socialization of industry. It resolved to hasten the international investigation at present under way. As soon as the results of this investigation are available the executive committee will draft a program of action. With respect to the labor demonstrations of May 1, the meeting resolved that these demonstrations should be adapted to the customs of each country and should be devoted to socialization and the enactment of the resolutions adopted by the International Labor Conference.

A New Labor Movement in India.

THE first conference of the Bombay mill hands held December 14, 1919, under the auspices of the Kamgar Hitwardhak Sabha, marked the inception of a labor movement in India. At that conference 28 resolutions were adopted setting forth the demands of the textile workers. While the character of the resolutions clearly indicates that the demands are those of a group of workers who are just becoming articulate as to their needs, they are, nevertheless, of interest as an indication of a recognition on the part of the workers of the need of improvement in their working conditions; and, furthermore, they are strongly suggestive of the actual industrial condition of one important industry of Bombay. The resolutions, quoted from the April, 1920, number of the American Federationist (pp. 345–347), follow in full:

1. The workmen of Bombay congratulate the King Emperor at the most successful peace celebrations and express their loyalty to the British Raj.
2. That the present system of 12 hours' work be reduced to 9, as the strain of continuous 12 hours' work tells upon the health of mill workers; that one hour recess be given instead of one-half hour.
3. That arbitrary and inequitable mill rules and regulations be abolished and that employers be asked to adopt uniform, humane, and equitable rules.
4. That Government be requested to procure detailed figures under the heads of forfeited and unclaimed wages and fines in mills and factories, with a view to publish the same in the factory report, and that these hard-earned wages of the poor be utilized for the betterment of the employees.
5. That payment of wages be made on one fixed date, the 15th of every month, and the authorities be requested to close liquor shops in the afternoon of that day.
6. That the age of half-timers be raised from 9 to 12, as the present system of employing child labor is injurious to the health of working-class children.
7. That half-timers from 12 to 14 years be compelled to attend schools in mills, and that these schools be under the control of the municipal schools committee.
8. That Government be asked to give in the annual factory report a more detailed list of serious accidents in mills and factories so as to include also those not due to machinery.
9. That legislation based on the lines of workmen's compensation act and employers' liability which prevail in England be introduced in this country.
10. That full-time doctors be employed in our mills and factories so that medical aid may be available to employees whether in mills or at their homes.
11. That créches be established in mills for the children of women workers.
12. That banks be started in mills and arrangements made to advance moneys to employees without charging any interest; that employers be requested to start provident funds and cooperative stores for their employees.
13. That employers be compelled by legislation to provide cheap and sanitary housing for their men.
14. That liquor shops, both foreign and Indian, be closed during holidays, and that Government be asked to take steps for the early closing at 8 p. m. of liquor shops.
15. That mills and factories be closed on every Sunday irrespective of any holidays in the week days.
16. That departments like the reeling and winding, where only females work, be under the supervision of literate women, and that the clerical staff in these departments should consist of females.
17. That first-aid and ambulance training be made compulsory in mills.
18. That the system of withholding small copper change at the time of payment of wages be discontinued and mill hands be not compelled to contribute for medical aid from their meager earnings.
19. That mill owners be asked to erect decent halls for their employees for taking their midday meals.
20. That employers be requested to provide swimming baths, adequate latrines, and water-closets according to the latest sanitary principles for their employees.
21. That mill hands in the city of Bombay are grateful to their employers for the bonus promised to them this year and pray that workers in the blow room, ring

throstle, side piecers, doffer boys, and half-timers will be equally dealt with in a liberal spirit, so that each adult may receive a minimum of 20 rupees [$6.48, par] and half-timers 10 rupees [$3.24 par] each.

22. That the practice of sucking shuttles in weaving department is highly unsanitary and that some hygienic measures be taken by mill owners to prevent any contagious disease being carried to other works by such sucking.

23. That workingmen submit to Government the necessity of nominating representatives from the backward communities in the municipal corporation and in the legislative councils to safeguard their interests on these bodies.

24. That when nominating any delegates for the International Labor Conference that Government will be pleased to make the choice from the backward communities, and strongly protest at the favoritism shown by Government when nominating a representative at the last conference at Washington.

25. That Government be asked to appoint a commission to inquire into their poor condition, due to the high prices and fix the minimum wages for laborers.

26. That these resolutions be submitted to the Bombay Government, the viceroy, the State secretary, the International Labor Conference, leading labor federations in Europe and America, and the Bombay Mill Owners' Association.

27. That the committee of the Kamgar Hitwardhak Sabha be asked to arrange about the next conference.

28. That a vote of thanks be proposed to the president.

STRIKES AND LOCKOUTS.

Strikes and Lockouts in the United States, January to March, 1920.

ACCORDING to information received by the United States Bureau of Labor Statistics, 730 strikes and lockouts occurred in this country during the first quarter of the year 1920. Inasmuch as many reports do not reach the Bureau until several months after the strikes occur, the number of strikes occurring during the quarter was probably somewhat larger than the above figure would indicate. Complete data relative to these strikes have not been received by the Bureau and it has not been possible as yet to verify what have been received. The figures in the following tables should therefore be understood to be only an advance statement and not to be accepted as final.

NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, JANUARY TO MARCH, INCLUSIVE, 1919 AND 1920.

Kind of dispute.	January.	February.	March.	Month not stated.	Total.
Strikes:					
1919	184	183	175	32	574
1920	193	184	267	67	711
Lockouts:					
1919	5	7	6	1	19
1920	6	4	6	3	19
Total:					
1919	189	190	181	33	593
1920	199	188	273	70	730

The figures in the above table indicate an increase in strike activity in 1920 as compared with the corresponding period in 1919.

Few strikes of any prominence occurred during the three months under consideration. Those in which the largest numbers were involved were the strikes of 50,000 sugar workers in Porto Rico, 12,000 others in Hawaii, and 15,000 railroad laborers in the Canal Zone. Other strikes that might be mentioned were those of the employees of the Norfolk & Western Railroad, workers in the Chicago & Alton Railroad shops, the longshoremen along the Atlantic coast, employees of the Railway Express in Chicago, workers in the building trades in St. Louis, Cincinnati, New York, and Dallas; leather workers in Philadelphia, van drivers in Chicago, chauffeurs, harbor boatmen, meat cutters, shoemakers, sailor-suit workers, petticoat makers, dressmakers, and garment workers in New York, shirt makers in Philadelphia, clothing workers in Albany, spinners in Fall River, brass workers in Ansonia, Conn., and the steel workers at Lackawanna, Pa.

The data in the following tables relate to the 711 strikes and 19 lockouts reported to have occurred in the three months under consideration. A few strikes that occurred during the quarter but in which the exact month was not stated appear in a group by themselves.

STATES IN WHICH 10 OR MORE STRIKES AND LOCKOUTS WERE REPORTED AS OCCURRING DURING THE FIRST QUARTER OF 1920.

State.	January.		February.		March.		Month not stated.		Total.		Grand total.
	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	
New York	34	2	32	.....	43	1	17	.....	126	3	129
Massachusetts	35	1	24	.....	45	.....	9	.....	113	1	114
Pennsylvania	16	.....	13	.....	26	.....	3	.....	58	.....	58
Ohio	8	1	15	1	16	1	3	1	42	4	46
Illinois	10	.....	8	1	18	2	4	.....	40	3	43
Connecticut	4	.....	7	.....	14	.....	7	1	32	1	33
Rhode Island	14	.....	4	1	7	.....	2	.....	27	1	28
New Jersey	11	.....	9	.....	6	.....	1	.....	27	.....	27
Washington	3	.....	5	.....	9	.....	3	.....	20	.....	20
Texas	5	.....	5	.....	5	.....	1	.....	16	.....	16
West Virginia	4	.....	3	.....	6	.....	2	.....	15	.....	15
California	2	.....	7	.....	5	.....	.....	.....	14	.....	14
Maryland	1	.....	9	.....	3	.....	1	.....	14	.....	14
Indiana	4	1	2	.....	4	.....	2	.....	12	1	13
Missouri	1	.....	4	.....	6	.....	1	.....	12	.....	12
Michigan	5	.....	2	.....	4	.....	.....	.....	11	.....	11
New Hampshire	3	.....	4	.....	3	.....	1	.....	11	.....	11
Minnesota	3	.....	2	.....	5	.....	.....	.....	10	.....	10
Oregon	2	.....	2	1	4	1	.....	.....	8	2	10
Wisconsin	3	.....	1	.....	4	1	1	.....	9	1	10
27 other States and Territories	25	1	26	.....	34	.....	9	1	94	2	96
Total	193	6	184	4	267	6	67	3	711	19	730

Of these disputes, 543 strikes and 15 lockouts occurred east of the Mississippi and north of the Ohio and Potomac Rivers; 120 strikes and 4 lockouts occurred west of the Mississippi, and the remaining 48 strikes south of the Ohio and Potomac Rivers and east of the Mississippi.

As to cities, New York City had the largest number of disturbances—80; followed by Chicago, with 28; Boston, with 14; Baltimore, with 13; Seattle, with 12; Cleveland, with 11; and Lynn, Philadelphia, and Providence, with 10 each.

As to sex, the distribution was as follows: Males, 494 strikes and 7 lockouts; females, 55 strikes and 1 lockout; both sexes, 15 strikes and 1 lockout; sex not reported, 147 strikes and 10 lockouts.

The industries in which 13 strikes and lockouts were reported are shown in the table which follows:

NUMBER OF STRIKES AND LOCKOUTS IN SPECIFIED INDUSTRIES REPORTED AS OCCURRING DURING THE FIRST QUARTER OF 1920.

Industry or occupation.	January.		February.		March.		Month not stated.		Total.		Grand total.
	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	
Clothing	17	2	20	.....	37	1	17	1	91	4	95
Building trades	30	.....	8	.....	32	.....	11	.....	81	.....	81
Textiles	28	.....	16	.....	30	1	5	.....	79	1	80
Metal trades	17	.....	23	.....	32	.....	4	.....	76	.....	76
Telephone and telegraph	.....	.....	19	.....	4	.....	.....	.....	23	.....	23
Miners	7	.....	3	.....	8	.....	1	.....	19	.....	19
Teamsters	6	.....	3	.....	10	.....	.....	.....	19	.....	19
Waiters and cooks	4	.....	8	.....	4	.....	2	.....	18	.....	18
Street railways	5	.....	5	.....	6	.....	1	.....	17	.....	17
Printing and publishing	5	1	5	.....	4	.....	1	.....	15	1	16
Shipbuilding	3	.....	6	.....	3	1	3	.....	15	1	16
Longshoremen	2	.....	5	.....	5	.....	1	.....	13	.....	13
Meat cutters	3	.....	1	.....	6	.....	3	.....	13	.....	13
Paper makers	5	.....	3	1	3	1	.....	.....	11	2	13
Railroads	4	.....	3	.....	6	.....	.....	.....	13	.....	13
Miscellaneous	57	1	49	3	77	1	18	1	201	6	207
Not reported	.....	2	7	.....	.....	1	.....	1	7	4	11
Total	193	6	184	4	267	6	67	3	711	19	730

Included in the above are 32 strikes of molders, 20 of machinists, 30 of boot and shoe makers, 16 of tailors, 14 of plumbers, 13 of hatters, and 10 of carpenters.

In 359 strikes and 11 lockouts the employees were reported as connected with unions; in 12 strikes they were not so connected; in 340 strikes and 8 lockouts the question of union affiliation was not reported.

In 429 strikes and 13 lockouts only one employer was concerned in each disturbance; in 15 strikes, 2 employers; in 11 strikes, 3 employers; in 4 strikes, 6 employers; in 5 strikes, 3 employers; in 149 strikes, more than 5; in 98 strikes and 6 lockouts the number was not reported.

In the 370 strikes for which the number of persons on strike was reported there were 272,361 strikers, an average of 736 per strike. In 59 strikes, in each of which the number involved was 1,000 or more, the strikers numbered 217,079, thus leaving 55,282 involved in the remaining 311 strikes, or an average of 178 each. By months, the figures are as follows: January, 62,212 strikers in 106 strikes, average 587, of whom 14,812 were in 93 strikes of less than 1,000 persons each, average 159; February, 116,841 strikers in 94 strikes average 1,243, of whom 14,641 were in 74 strikes of less than 1,000 persons each, average 198; March, 72,232 strikers in 142 strikes, average 509, of whom 21,253 were in 122 strikes of less than 1,000 persons each, average 174. In 6 lockouts the number reported to have been involved was 1,362, averaging 227 persons each.

The following table shows the causes of the strikes and lockouts in so far as reported. In about three-fourths of the disturbances the question of wages or hours was prominent and in nearly one-fourth the question of union recognition or existence was involved.

PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS REPORTED AS OCCURRING DURING THE FIRST QUARTER OF 1920.

Cause.	January.		February.		March.		Month not reported.		Total.		Grand total.
	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	
For increase in wages	84	.....	85	1	131	.....	26	1	326	2	328
Because of decrease in wages	4	.....	4	.....	1	.....	.....	.....	9	.....	9
Nonpayment of wages	.....	.....	2	.....	2	.....	.....	.....	4	.....	4
Increase in hours	.....	.....	1	.....	.....	.....	.....	.....	1	.....	1
For decrease of hours	5	.....	4	.....	7	.....	1	.....	17	.....	17
For increase of wages and decrease of hours	25	.....	23	.....	16	.....	7	.....	71	.....	71
Recognition	14	2	18	2	17	1	3	1	52	6	58
Recognition and wages	5	.....	7	.....	5	1	5	1	22	2	24
Recognition and hours	.....	.....	.....	.....	2	.....	.....	.....	2	.....	2
Recognition, wages, and hours	.....	.....	1	.....	4	.....	.....	.....	5	.....	5
Recognition and conditions	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1
General conditions	1	.....	1	.....	4	.....	2	.....	8	.....	8
Conditions and wages	2	.....	1	.....	4	2	.....	.....	7	2	9
Conditions, wages, and hours	.....	.....	.....	.....	2	.....	.....	.....	2	.....	2
Employees discharged	7	.....	6	.....	11	.....	4	.....	28	.....	28
For discharge of objectionable persons	1	.....	.....	.....	2	.....	.....	.....	3	.....	3
Nonunion men	5	.....	1	.....	11	.....	.....	.....	17	.....	17
Relative to agreement	2	.....	.....	.....	2	.....	.....	.....	4	.....	4
For a new agreement	2	.....	2	.....	2	.....	.....	.....	6	.....	6
Sympathy	7	.....	3	.....	4	.....	.....	.....	14	.....	14
Jurisdiction	1	.....	.....	.....	2	.....	.....	.....	3	.....	3
Miscellaneous	11	.....	9	.....	12	.....	1	.....	33	.....	33
Not reported	17	4	16	1	26	2	17	.....	76	7	83
Total	193	6	184	4	267	6	67	3	711	19	730

It is frequently difficult to state exactly when a strike terminates since many strikes end without any formal vote on the part of the strikers. The following table relates to such strikes and lockouts as the Bureau has been advised actually terminated during the first quarter of 1919 and of 1920.

NUMBER OF STRIKES AND LOCKOUTS ENDING DURING JANUARY, FEBRUARY, AND MARCH IN 1919 AND 1920.

Year.	January.	February.	March.	Month not stated.	Total.
Strikes:					
1919	116	105	113	13	347
1920	82	60	81	1	224
Lockouts:					
1919	2	2	5	1	10
1920	2	2	1	.....	5
Total:					
1919	118	107	118	14	357
1920	84	62	82	1	229

Disputes terminating in favor of the employers numbered 24, disputes terminating in favor of the employees numbered 39, disputes compromised numbered 56. In 10 strikes, the employees returned to work under promise of the employer to arbitrate the matter in dispute. In 95 strikes and 5 lockouts the result was not reported. In 20 strikes, the duration of which was not reported, the statement was simply made that the trouble was soon terminated. In 2 strikes the positions of the strikers were filled with practically no interruption in the work. Twenty-one strikes were reported as unauthorized.

DURATION OF STRIKES AND LOCKOUTS ENDING DURING THE FIRST QUARTER OF 1920, OF NUMBER REPORTING.

Period.	January.		February.		March.		Total.		Grand total.
	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	Strikes.	Lockouts.	
1 day or less	2	.....	7	.....	6	.....	15	.....	15
2 days	2	.....	1	.....	1	.....	4	.....	4
3 days	.....	.....	1	.....	4	.....	5	.....	5
4 days	1	.....	1	.....	3	.....	5	.....	5
5 to 7 days	1	.....	4	.....	5	.....	10	.....	10
1 to 2 weeks	7	.....	6	.....	8	.....	21	.....	21
2 to 3 weeks	2	.....	2	.....	5	.....	9	.....	9
3 to 4 weeks	.....	.....	2	.....	2	.....	4	.....	4
1 to 3 months	3	1	1	.....	2	.....	6	1	7
Over 3 months	4	.....	2	.....	6	.....	12	.....	12
Total	22	1	27	.....	42	.....	91	1	92

The number of days lost in strikes ending during the quarter was 3,170. The average duration of these strikes was about 35 days. The average duration of strikes lasting less than 90 days was 8 days. By months the record is as follows: January, days lost, 664, average 30 days; February, days lost, 661, average 25 days; March, days lost, 1,845, average 44 days. The one lockout reported as ending in the quarter lasted for 7 weeks.

CURRENT NOTES OF INTEREST TO LABOR.

Waste of Woman Power on the Farms.[1]

A RECENT survey of 10,000 farm homes in 33 Northern and Western States has been made under the direction of the States Relations Service of the United States Department of Agriculture. This investigation leads to the conclusion that the wastage of woman labor in these agricultural communities constitutes "one of the greatest menaces to the rural life of the Nation."

The lack of modern equipment makes many of these farm homes centers of drudgery and explains in part why women object to farm life. The average farm woman, according to the survey, works 11.3 hours the year round, and in summer 13.12 hours. Over 80 per cent of these farm women have no regular vacation during the year. Fifty per cent start work at 5 a. m. Approximately 60 per cent must go to the pump or spring for water. Eighty per cent have no bathrooms. Ninety-six per cent do the family washing and only half of these have washing machines. Seventy-nine per cent have kerosene lamps to fill and trim, and 54 per cent care for two coal or wood stoves.

The report suggests that if the farmer would spend less in acquiring additional land and more in modernizing his home so as to make it as up to date as his barn, the result would be not only the conservation of the energies of the women of his household, but an increase in the profit and comfort of agricultural life.

Report of the Department of Labor of New Jersey, 1918–19.

THE report of the Department of Labor of New Jersey for the year ending June 30, 1919, notes the operations of various bureaus, including the Bureau of Hygiene and Sanitation, of Industrial Statistics, of Mines and Quarries, the Bureau of Industrial Accidents, the Employment Bureau, and the Workmen's Compensation Bureau. Under factory lighting there is a paper giving the status of the industrial lighting code in New Jersey.

The Workmen's Compensation Bureau report notes changes made in the compensation law, including an increase in the maximum compensation from $10 to $12 and in the minimum from $5 to $6, and an advance in the compensation rate from 50 to 66⅔ per cent of weekly wages. The statistical report shows a total of 401 fatal accidents and 13,021 nonfatal accidents during the year ending June 30, 1919. Of the nonfatal cases closed during the year compensation was paid to 11,791, the total amount so paid being $1,695,132.40, or an average of $137.94 per case. The total compensation paid to

[1] Data supplied by the States Relations Service of the U. S. Department of Agriculture from a forthcoming report entitled "The Farm Woman's Problems."

dependents in 334 fatal cases was $715,732.33, or an average of $2,142.91 per case.

During the year the Industrial Accident Board received 31,251 reports of tabulatable accidents, including 523 fatal, and in addition, 20,000 reports of minor accidents. Both fatal and nonfatal accidents are distributed in four occupation groups, as follows: Factories and workshops, 350 fatal and 17,304 nonfatal; building construction, 57 fatal and 7,084 nonfatal; mines and quarries, 17 fatal and 205 nonfatal; miscellaneous, 99 fatal and 6,135 nonfatal. The greatest single cause of fatal accidents in the factory and workshops group was explosions of powder and dynamite, the number being 120, or 34.3 per cent. In the same group the chemical industry was responsible for the largest number of fatal accidents, 192, or 54.9 per cent, while the metal-products industry was responsible for the largest number of nonfatal accidents, 4,571, or 26.4 per cent. A large number of eye injuries was reported in the factory and workshops group, the total being 1,716, or nearly 10 per cent. In the building-construction group more than 17 per cent of the fatal accidents were caused by falls from ladders, scaffolds, etc.

Plan for a Group Industrial Surgical Hospital.

A NOVEL plan for caring for the industrially injured is that advanced by Dr. A. Moncrieff Carr of the United States Public Health Service in a recent issue of Modern Medicine.[1] Dr. Carr believes that in the general hospitals where the majority of those injured are now treated the physicians frequently lack knowledge of modern bone surgery or other industrial surgery and fail also in the understanding of plant relations which may have an important bearing on the successful handling of these cases. The nurses, too, often fail to appreciate the problem of the injured worker and both staff and nurses, it has been observed, commonly consider the industrial case as a nuisance. His solution of the problem, therefore, is "a central hospital, with outlying dressing or emergency stations, organized for prompt, efficient service, serving a group of industries, emergency and surgical; cooperative and follow-up, reconstruction and rehabilitation services, with a selected trained personnel, developed on a unit system for the special needs of the group." In establishing such a hospital he emphasizes the need of a preliminary survey of the industrial group to be served, including an estimate of the types of accidents and comparison with those of other industrial groups.

In regard to the qualifications of staff and nurses the writer stresses the fact that the chief surgeon in addition to recognized surgical ability, including, preferably, experience in modern war surgery, should have executive ability and also be thoroughly conversant with industry, and his assistants and nurses should have experience and adaptability sufficient to enable them to cooperate fully with him. In order to attract desirable people to these positions it would be necessary to pay them on the same basis as that of the remuneration they would receive in private practice or employment. This is one

[1] The group industrial surgical hospital. By A. Moncrieff Carr, M. D., United States Public Health Service, Philadelphia, Pa. In Modern Medicine, Chicago, June, 1920, pp. 426-430.

of the strongest arguments for the group hospital since it is only the comparatively few large industries which can afford to maintain adequate establishments and employ the best surgical skill. Aside from the usual hospital facilities a department for preemployment and periodic physical examinations is advised. Vocational training either along the lines of the patient's work or in some similar trade should be given as early in convalescence as possible. The book and chart work can be begun in the ward, thus giving the injured man the incentive toward recovery which he needs in order to meet the natural discouragement attendant on his accident. Follow-up or social service work is likewise regarded as of great importance. This includes keeping clear records of all patients in the hospital and a weekly or monthly report of all patients discharged within one year at least.

The writer believes that the establishment of group hospitals presents a solution of the problem of caring for the industrial cripple and that such hospitals also offer the best possible opportunity to utilize the experience gained in the war for the good of industry at large.

Formation in Belgium of a Corps of Strike Breakers.

THE Handelsblad van Antwerp (May 7, 1920) reports that the Belgian Middle Classes' Committee for the Protection of Civic Rights (*Middencomiteit van Propaganda en Burgerverweer*), which was recently established, has for its aim the formation of a well-organized body of strike breakers. The public utility services have been divided into the following twelve groups: Police, fire department, water works, electric light, gas, roads, transport and street cars, railways, post, telegraph and telephone, hospitals, and miscellaneous services. Large numbers of citizens have received directions as to the action expected of them in case of strikes, and many fresh applications to join the organization are being received daily. Many men already in the post, telegraph, and telephone services have joined the Middle Class Union to show their disapproval of strikes.

Status of Spanish Workmen in France.

THE labor committee of the Spanish Chamber of Commerce in Paris has drawn up a lengthy report on the status of Spanish workmen in France, and recommended a convention between France and Spain with regard to them.[1] The Chamber of Commerce has obtained from the French Central Service for the Recruiting and Placing of Foreign Workers (*Service Central de Recrutement et de Placement des Travailleurs Étrangers*), hereinafter referred to as the Central Employment Service, the following information on the condition of Spanish workers in France:

If the Spanish workman on entering France applies at the official Government depots created for the purpose he will receive a pass

[1] Data taken from the Economic Review (Review of the Foreign Press), London, May 26, 1920 (p. 81). Source: Espana Economica y Financiera. Madrid, May 1, 1920.

(*carte verte*) allowing him to travel in France. A workman who on the termination of a contract has another place assured him will encounter no difficulty in proceeding to it. If he has no such place then he can always apply to the control centers at Marseilles, Lyons, Nantes, Toulouse, and Bordeaux, or at the central office in Paris. Even the immigrant who does not procure a pass (*carte verte*) on application to the above-mentioned centers, will receive such assistance and employment as may be possible. This pass is a war expedient and will soon be replaced by some other system. In the case of a strike the foreign workman is in a difficult position, seeing that if he takes part he is liable to deportation for intervening in politics, and if he abstains he is liable to be treated as a blackleg. The Central Employment Service can not interfere in such disputes, as the French workman has the unquestioned right to strike.

An important question is that of the remittance to Spain of the workman's earnings, since the act of April 3, 1918, prohibits the sending out of France of sums exceeding 1,000 francs ($193, par). However, the Central Employment Service believes that if the workman applies for assistance to the heads of the labor depots of Peripignan and Hendaye the custom authorities will place no difficulties in the way of allowing such sums to leave the country. The Central Employment Service, however, advocates an agreement between the savings banks of France and Spain, such as already exists with Belgium and Italy, and which has produced excellent results. This agreement could be incorporated in the general convention between France and Spain relating to workmen, to which the Central Employment Service would give its cordial support.

The Central Employment Service has full statistics of the state of the labor market, and can give precise information as to where work may be obtained. For instance, at the present time workmen can find immediate and lucrative employment in any branch of the building trade, not only in the devastated areas, but all over France. The labor depots above mentioned have been created on purpose to facilitate the immigration of workmen, especially of Spanish workmen, whose qualities are highly appreciated, by receiving and maintaining them until employment is found for them.

The Central Employment Service transmits to the depots the demands of employers on a stock form (*contrat type,*), which sets out the exact conditions of work, thereby enabling the workman to obtain employment as soon as he presents himself. The costs of bringing the workman into the country are advanced by the Government and immediately refunded by the employer. The conditions of work are identical with those offered to the French workman. In addition to the "contrat type," which only applies to industrial labor, certain forms are supplied by the National Agricultural Employment Office (*Office National de la Main d'Oeuvre Agricole*), which employers of agricultural workers are obligated to fill in; these set forth the terms of the contract relating to wages, food, lodgings, time, and expressly bind the employer at the time of the termination of the contract to repay to the workman his fare from and to Spain, provided always that he be duly qualified to perform the special work for which he has applied. The Central Employment Office has offered to consider any demand or claim which may be made by the Spanish Chamber of Commerce in Paris.

PUBLICATIONS RELATING TO LABOR.

Official—United States.

ARIZONA.—*State mine inspector. Annual reports. Vols. 7 and 8; 1918 and 1919. [Phoenix, 1918 and 1919]. 99 pp; 79 pp.*

ILLINOIS.—*Legislative Reference Bureau. Social and economic problems. Springfield [1919]. pp. 1130–1189. Constitutional convention. Bulletin No. 14.*

This bulletin deals with the economic provisions of the State constitution and covers housing and ownership of homes, social insurance, soldiers' bonuses and preferences, injunctions in labor cases, and corporations and public utilities.

INDIANA.—*Industrial Board. Report for year ending September 30, 1919. [Indianapolis] 1920. 109 pp.*

An account of the recently organized women and children's department included in this report appears on pages 100 and 102 of this issue of the MONTHLY LABOR REVIEW. Also, a report of the compensation department on page 131 is noted.

NEW YORK.—*University. Organization and administration of part-time schools. Albany, Nov. 1, 1919. 42 pp. Bulletin No. 697.*

A law providing for compulsory part-time education for boys and girls, between the ages of 14 and 18, who have discontinued attendance upon school before graduation from high school, was enacted by the New York State Legislature during 1919. Bulletin No. 697 defines the law and gives the regulations of the regents of the university governing the establishment and administration of part-time schools. It also contains the recommendations of the commissioner of education relating to their organization and management.

—— (CITY).—*Department of Health. Clinical types of occupational diseases, by Louis I. Harris, New York City, 1919. 20 pp. Reprint series No. 83.*

An address read before the section on pathology and physiology of the seventieth annual session of the American Medical Association, Atlantic City, June, 1919. Reprinted from the Journal of the American Medical Association, September 20, 1919, vol. 73, pp. 880–886.

This is a study of methods of preventing occupational diseases. Special attention is given to carbon monoxid, chemical, and lead poisoning, apparent carbon dioxid poisoning, and anthrax. Other subjects under consideration are industrial disease and hygiene in the medical curriculum, insufficient information of private practitioners, and opportunities of health officers.

—— ——. *Conditions affecting health in the millinery industry, by S. Dana Hubbard and Christine R. Kefauver. New York, April, 1920. Monthly Bulletin, vol. 10, No. 4, pp. 81–97.*

A brief digest of this report appears on pages 107 to 109 of this issue of the REVIEW.

PENNSYLVANIA.—*Department of Labor and Industry. [Bureau of Mediation and Arbitration. Report and record of strikes, 1916–1919.] Harrisburg, 1920. 24 pp. Bulletin of the Department of Labor and industry, vol. 7, 1920, No. 1.*

—— *Department of Mines. Report, 1917. Part I.—Anthracite. Harrisburg, 1919. 750 pp.*

Part II of this report concerns bituminous coal mining and was noted on page 225 of the MONTHLY LABOR REVIEW for March, 1920.

—— *Workmen's Compensation Board. Decisions for the year 1918. Vol. III. Harrisburg, 1920. 420 pp.*

RHODE ISLAND.—*Factory inspectors. Twenty-sixth annual report of factory inspection, 1919. Providence, 1920. 81 pp.*

The report shows that during the year 7,158 establishments were inspected, including 184,135 workers over 16 years of age and 7,595 workers under 16 years of age, a total of 191,730. The percentage of child labor is, therefore, 3.96.

UNITED STATES.—*Department of Labor. Office of the Secretary. Labor conditions in Porto Rico. Washington, 1919. 67 pp.*

Presents the results of a study of economic conditions in general and conditions of Porto Rican laborers in particular with a view to determining whether or not Porto Rico needs an employment office and how such an office could be of assistance to its people. Among the subjects dealt with in the report are strikes, housing, a living wage, emigration as a solution of the Porto Rican labor problem, need of new industries, and solution of the land problem.

—— —— *Women's Bureau. Home Work in Bridgeport, Conn. Washington, 1920. 35 pp. Bulletin No. 9.*

This report on home work in a city containing, according to the Report of the State Commissioner of Labor of Connecticut, 528 home workers, or about 20 per cent of a total of 2,575 in the State, and in which home work increased 51 per cent from 1917 to 1918, while it increased only 15 per cent in the State as a whole during the same period, was made by the Women's Bureau at the request of local agencies interested in industrial conditions. The Bureau found that the median wage for home workers was between $4 and $5 per week. A memorandum of recommendations was submitted to a conference of Bridgeport employers, but no definite results seem to have ensued. The report covers facts disclosed, remedies suggested, the attitude of the people of Bridgeport mostly concerned with the subject, and the legal remedies that are being applied in other States. There is appended a statement of the various State laws prohibiting or regulating home work compiled from data furnished by the U. S. Bureau of Labor Statistics.

—— *Federal Board for Vocational Education. Safety lamps. Including flame safety lamps and approved electric lamps. Washington, November, 1919. 71 pp. Bulletin No. 42. Trade and industrial series No. 12.*

A series of 12 simple lessons on safety lamps for use in the trade extension classes organized in coal-mining communities.

Official—Foreign Countries.

AUSTRALIA (SOUTH AUSTRALIA).—*Statistical department. Statistical register of the State of South Australia for the year 1918–19. Part V.—Production. (Section 1.—Prefatory report.) [Adelaide] 1919.*

Includes a statement of the number of hands employed in farming and in factories and gives tables showing average salaries and wages by industries in 1913, 1917–18, and 1918–19.

CANADA.—*Department of Labor. Ninth annual report on labor organization in Canada (for the calendar year 1919). Ottawa, 1920. 299 pp.*

A brief digest of this report is given on pages 171 to 173 of this issue of the REVIEW.

—— (BRITISH COLUMBIA).—*Workmen's Compensation Board. Workmen's compensation act. Accident prevention regulations. Vancouver, 1920. 30 pp.*

Rules and regulations adopted by the board for the guidance of employer and employee in accident prevention work.

—— —— *Second annual report for the year ending December 31, 1918. Victoria, 1919. 48 pp.*

This report is noted on pages 131 to 133 of this issue of the REVIEW.

—— (ONTARIO).—*Workmen's Compensation Board. Report for 1919. Toronto, 1920, 70 pp.*

A brief digest of this report appears on pages 133 and 134 of this issue of the REVIEW.

GREAT BRITAIN.—*Board of Education. Report for the year 1918–19. London, 1920. 98 pp. Cmd. 722.*

Chapter III, in which continuation schools, classes for employees, juvenile employment committees, university tutorial classes, etc., for both England and Wales are considered, is of special interest.

—— *Laws, statutes, etc. Manuals of emergency legislation. War material supplies manual. Fifth edition, revised to Dec. 31, 1919. London, 1919. xxviii, 170 pp.*

—— *Ministry of Labor. Industrial councils.* [*London, 1920.*] *32 pp. Industrial reports No. 4 (revised).*

This report contains suggestions as to the constitution and functions of a national joint industrial council, of district councils of national joint industrial councils, and of works committees in industries in which national joint industrial councils are established. The first part of this report as originally issued was published in the MONTHLY LABOR REVIEW for August, 1918 (pp. 76–79), and the second and third parts as originally issued were published in the MONTHLY LABOR REVIEW for May, 1919 (pp. 116–122). They are also included in Bulletin 255.

—— —— *Industrial courts act, 1919. Report by a court of inquiry concerning transport workers—wages and conditions of employment of dock labor. London, 1920. 20 pp. 55.*

A summarization of this report appeared in the MONTHLY LABOR REVIEW for May, 1920 (pp. 54–62).

—— *Ministry of Munitions. Annual accounts of the ordnance factories for the year 1918–19, with the report of the comptroller and auditor general thereon. London, 1920. 10 pp. 99.*

—— *Oversea Settlement Committee. Report of delegates appointed to inquire as to openings in Australia for women from the United Kingdon. London, 1920. 24 pp. Cmd. 745.*

A brief digest of this report appears on pages 97 and 98 of this issue of the REVIEW.

INDIA.—*Department of Statistics. Large industrial establishments in India. Calcutta, 1920. 72 pp. Fourth issue. No. 1161.*

Shows the name and situation of all large industrial concerns in India. A diagram illustrates the relative importance, according to the average number of persons daily employed, of the different classes of industries.

JAPAN.—*Department of Agriculture and Commerce. Thirty-fifth statistical report.* [*Tokyo*] *1920. 761 pp.*

An excerpt from this report, giving wages current in various occupations in June and December, 1918, appears on pages 88 and 89 of this issue of the REVIEW.

—— *Department of Education. Forty-fourth annual report of the Minister of State for Education (1916–17) (abridged). Tokyo, November, 1919. 382 pp. Charts.*

Includes statistics of pensions paid to retired teachers and to families of deceased teachers.

SWEDEN.—*Delegation at the Interallied Housing and Town Planning Congress, London, June, 1920. The housing question in Sweden.* [*Stockholm, 1920.*] *64 pp.*

A short descriptive account of the housing situation in Sweden, considering such subjects as production of houses and housing requirements in Sweden, housing and town-planning legislation, garden city movement in Stockholm, housing inspection, credits for house building, effect of the war upon housing, rent restriction legislation, and Government and municipal support of housing. A feature of this pamphlet is its analysis of housing requirements in Sweden.

As a result of the war the supply of dwellings in 1919 was 46 per cent less than the normal requirements of 1912–13, while the number of rooms was 53 per cent less than the normal requirements, based on the year 1912–13.

SWEDEN.—*Government Delegation for International Socio-political Work. The seafaring trade in Sweden.* [*Stockholm, 1920.*] *48 pp.*

This comprises principally a description of the laws and regulations governing working conditions of Swedish seamen and fishermen. It includes such topics as the manning of vessels, engaging and shipping of seamen, wages, working conditions, institutions for pensioning and relief of seamen, organization among seamen, and the extent of collective agreements.

—— *Socialstyrelsen. Kollektivavtal i sverige år 1918. Stockholm, 1920. vi, 43 pp.*

This report shows that there were concluded in Sweden, in 1918, 855 new collective agreements affecting 4,526 establishments and 118,098 wage earners. At the beginning of 1918 there were 1,779 collective agreements in force affecting 297,346 workers, and at the end of the year the number of agreements had increased to 2,041 and the number of employees affected to 316,772.

Reports from 4,414 employers in whose establishments were employed 115,562 workers, or practically 98 per cent of those for whom collective agreements were negotiated in 1918, gave the distribution of workers according to certain classified hours of labor per week. This is indicated in the table.

NUMBER AND PER CENT OF EMPLOYEES UNDER COLLECTIVE AGREEMENTS WORKING SPECIFIED HOURS PER WEEK.

Hours per week.	Employees.		Per cent working specified hours in 1916.	Hours per week.	Employees.		Per cent working specified hours in 1916.
	Number	Per cent.			Number.	Per cent.	
48 hours and less	6,223	5.4	4.0	58 hours	1,643	1.4	3.6
49 to 53 hours	32,211	27.9	3.1	59 hours	3,598	3.1	6.5
54 hours	5,580	4.8	9.9	60 hours	13,916	12.1	43.0
55 to 56 hours	3,925	3.4	4.0	Over 60 hours	488	.4	2.0
57 hours	47,978	41.5	23.9	Total	115,562	100.0	.....

Unofficial.

AMERICAN PRISON ASSOCIATION. *Proceedings of annual congress, New York City, October 20 to 24, 1919. Indianapolis* [*1920*]. *627 pp.*

ASSEMBLY OF CIVIL SERVICE COMMISSIONS. *Twelfth annual meeting. Tackling employment problems; veteran preference in nation, State, and city. Experts discuss vital needs before assembly of civil service commissions at Rochester (New York), conference, June 11, 12, and 13, 1919. Washington, John T. Doyle, Secretary, 1724 F Street NW., 1919. 189 pp.*

BAKER, RAY STANNARD. *The new industrial unrest: Reasons and remedies. New York, Doubleday, Page & Co., 1920. 231 pp.*

A study of the present industrial unrest and suggested solutions of the problem, such as Americanization, political action, welfare work, and the shop-council system. The writer seeks to present the matter from the viewpoint of both employer and employee.

BEER, M. *A history of British socialism. Vol. II. London, G. Bell & Sons, Ltd., 1920. 413 pp.*

The first volume of this work, covering the period up to the rise of Chartism in 1836, appeared in 1919 and was reviewed in the MONTHLY LABOR REVIEW for August, 1919, page 295. The first part of this volume is devoted to the growth and influence of Chartism and the second part to modern socialism; that is, from 1855 to 1920, with especial attention to developments from the beginning of the war to the present time.

BULMAN, H. F. *Coal mining and the coal miner. London, Methuen & Co., Ltd. [1920]. 338 pp. Illus.*

This volume comprises a descriptive account of conditions in coal mining in Great Britain in normal times and is written by a mining engineer who has been a colliery manager and a director of colliery companies, and who has also lived for many years among the miners. "It may perhaps serve as a useful corrective to some erroneous ideas, which have arisen from the proceedings of the coal commission." The book covers such topics as labor, wages, disputes and methods of settlement, trade-unionism, housing, accidents and disease, as well as the technological and financial aspects of the coal industry.

The writer is obviously opposed to Government intervention in the control of the coal industry and deprecates governmental action in relation to employer and employee in the industry. "An agreement made under governmental intervention is not accepted with the same cordial assent as one made by mutual consent."

CARLTON, F. T. *Organized labor in American history. New York, D. Appleton & Co., 1920. 313 pp.*

In this volume the author traces the development of trade unionism in the United States from its start up to the present time in its relation to the development and growth of the country. An account of the various labor and reform movements is given and present-day tendencies and reforms are discussed.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE. *Negro migration during the war, by Emmett J. Scott. New York, Oxford University Press, American branch, 35 West Thirty-second Street, 1920. 189 pp. Preliminary economic studies of the war No. 16.*

A study of the economic results of the migration of approximately 400,000 Negroes from the South to the northern States during the three years following the outbreak of the war in Europe, particularly during 1916 and 1917. The lure of high wages and more independence are suggested as the real reasons for the migration. The author believes that on the whole the movement has been and will continue to be a benefit to the South, since it has brought about a change of attitude toward the Negro and has compelled the thinking classes of the South "to construct and carry out a policy of fair play to provide against the day when the South may find itself again at the mercy of the laboring classes of the Negroes." The tendency to maltreat the Negroes without cause, the custom of arresting them for petty offenses, and the institution of lynching have, in the opinion of the author, been somewhat checked by "a reshaping of public opinion."

CODERCH, RAFAEL. *Retiros obreros. Estudio crítico. Real Decreto de 11 de marzo de 1919 que ha de regular su implantación en España. Madrid, 1919. 355, xli pp. Graphics.*

This volume is a critical study of the royal decree of March 11, 1919, establishing a system of workmen's retirement in Spain. The author says that this analysis and criticism is for the purpose of explaining ambiguities which necessarily will be found in the execution of the obligatory workmen's retirement fund.

COLE, G. D. H. *Chaos and order in industry. London, Methuen & Co., Ltd. [1920]. 292 pp.*

In this book the author urges a "complete overhauling" of the industrial system or threatens that England will plunge slowly, like Europe, "into a chaos out of which a better order may arise, but which will certainly first cause untold suffering in every class," and he sees nowhere in Europe except in the soviet countries a government which has either the courage or the power to remedy one of the fundamental evils of the present system. As usual with the writer the "guilds" are the solution of the problem, and he advocates nationalization of railways and mines and the socialization of banking. He believes that the power of the Whitley councils is negligible and that the proletariat must not allow "preoccupation with such immediate schemes to divert

our main attention from our fundamental object—the abolition of the wage system—or from the constructive steps which the working class itself must take with a view to securing that object."

COLE, G. D. H. *Social theory. London, Methuen & Co., Ltd.* [*1920*]. *220 pp.*

This book is a study of social organization not from the standpoint of the State or any other particular form of association, which has been the usual way of developing the subject, but from the standpoint of the community, and it deals with "association as a whole and the way in which men act through associations in supplement and complement to their actions as isolated or private individuals."

DAVIES, A. EMIL. *The case for nationalization. London, Allen & Unwin, Ltd.* [*1920*]. *310 pp.*

The author of this volume is chairman of the Railway Nationalization Society. He presents the program of the British Labor Party in respect to Government ownership of railroads, with some consideration given to other national utilities. "The purpose of this work is to put forward in brief form the replies to the various attacks on nationalization that are printed so freely in the press * * *. The case for nationalization consists largely in the argument that, with some vital services and industries, the profit-making incentive, which can not be dissociated from private enterprise, becomes a hindrance to social development and must be replaced by an organization working solely with the idea of service * * *. In so far as private enterprise is condemned in this book, it is the system, and not individuals, which is aimed at. It is of no use blaming people for making big profits." For any business "not to make the largest possible profits would, moreover, in most cases merely result in subsidizing competitors. It is the system which permits—nay, even inculcates as a duty—the making of the greatest possible profits out of the needs of one's fellow men without thought of the results to the community, which is at fault; and it is up to those who, like the present writer, believe that the evils of this system can only be eliminated by means of national or municipal ownership of some of the great vital services and industries, to set forth, for the consideration of others, the arguments and instances in support of this belief. And that is the purpose of this modest volume."

FAY, C. R. *Cooperation at home and abroad. A description and analysis, with a supplement on the progress of cooperation in the United Kingdom (1908–1918). Second edition. London, P. S. King & Son, 1920. 447 pp.*

HARRIS, LOUIS I. *Occupational causes of ill health.* [*New York.*] *A. R. Elliott Publishing Company, 1919. 13 pp. Reprinted from the New York Medical Journal, November 29, 1919.*

Considers occupational diseases in two groups, specific and nonspecific, the first group being those diseases which are due to particular poisons or to special conditions in certain industries of such character that when the disease is mentioned it immediately calls to mind a specific industry; and the second those diseases in which the occupation of the individual plays a small or a large part as a cause of the disease.

INSTITUTES SOLVAY. *Institute de Sociologie. Travaux des Groupes d'Études de la Reconstitution Nationale. Brussels and Paris, 1919. 9 vols.*

This series of studies on national reconstitution includes: (1) Taxes on excess war profits (158 pp.); (2) The question of rents (128 pp.); (3) State action against alcoholism (97 pp.); (4) Senate reform, by Georges Smets (355 pp.); (5) Autonomy of railroads of the State, Belgium (278 pp.); (6) Inheritance tax (78 pp.); (7) Tariff reform in relation to food products (79 pp.); (8) Return to legal régime (88 pp.); and (9) District organization of public services, by Gustave Abel (104 pp.).

IOTEYKO, DR. JOSEFA. *La fatigue. Paris, Ernest Flammarion, Éditeur, 1920. 331 pp. Illus.*

This work deals with fatigue from its biological standpoint, its origin, location, character, and intensity, taking up fatigue of the muscles, of the heart and respiratory

organs, of the brain, etc. The latter part of the book is devoted to the illnesses due to fatigue and to the psychoneuroses and neurasthenia induced by the war.

LEVERHULME, LORD. *The six-hour shift and industrial efficiency. Being an abridged and rearranged edition of the author's Six-hour day. New York, Henry Holt & Co. 1920. 265 pp.*

A review of The six-hour day, of which this is an abridgment, appeared in the MONTHLY LABOR REVIEW for April, 1919, pp. 168–173.

MARCY, MARY E. *The right to strike. Chicago, Charles H. Kerr and Company. [1920.] 32 pp.*

MASSÉ, DANIEL, AND BOVIER-LAPIERRE, M. *Cours de legislation du travail et prévoyance sociale professé à l'Ecole spéciale des Travaux Publics, du Bâtiment et de l'Industrie. Paris, 1919. 477 pp.*

This is a revised and enlarged edition of a former philosophical treatise on the progress of labor legislation in France, as taught in the special school of public works, construction, and industry (Paris). The discussion is presented under three principal heads: Labor contracts, labor regulations, and social insurance and welfare legislation.

MERCHANTS' ASSOCIATION OF NEW YORK. *Industrial pensions. Report of special committee on industrial pensions and report of a survey of industrial pension systems by the industrial bureau. New York, 1920. 49 pp.*

The report contains a summary of the essentials of a successful pension system, an analysis of the provisions of the 142 systems studied, and reports as to the results of the systems. From the replies as to the success of the plans it was found that there is little foundation for the belief that pension systems bring about increased efficiency or loyalty among employees. A typical pension plan, a list of firms maintaining pensions, and tabular statements as to the source of funds and the success of the plans are appended.

NATIONAL CANNERS ASSOCIATION. *Canners directory and lists of members of the Canning Machinery and Supplies Association and the National Canned Foods and Dried Fruit Brokers Association. Washington, D. C., 1739 H Street NW., 1920. 232 pp.*

NATIONAL CONFERENCE ON IMMIGRATION. *Proceedings of National conference on immigration, under auspices of the Interracial council, New York, April 7, 1920. 233 Broadway, New York, 1920. 113 pp.*

NATIONAL RESEARCH COUNCIL. *Research laboratories in inaustrial establishments of the United States of America. Washington, D. C., March, 1920. pp. 45–130. Bulletin. Vol. 1, part 2, No. 2.*

A classified list of industrial establishments with some information about staff work, and equipment.

ONTARIO SAFETY LEAGUE AND CANADIAN NATIONAL SAFETY LEAGUE. *Papers presented at three-day safety convention, Toronto, April 13 to 15, 1920. Toronto, 189 Church Street, 1920. 72 pp.*

This pamphlet contains 15 papers, with discussions, on industrial safety, as presented at the three-day safety convention of the Ontario Safety League and the Canadian National Safety League held in Toronto in April, 1920, being the first annual meeting of the Canadian National Safety League and the sixth annual meeting of the Ontario Safety League. The subjects treated are industrial hygiene, accident prevention in the steel industry, elevators, grinding wheels, hazards in grain elevators and cereal mills, accident prevention in the rubber industries, accident prevention in the automobile industry, industrial dust, shop lighting, resuscitation, accident prevention in the pulp and paper industry, shop safety committees and industrial relations, steam railroad hazards, and fire prevention. At the annual luncheon an address on the safety movement was delivered by R. M. Little, director of the Safety Institute of America, New York City.

PRICE, ENID M. *Changes in the industrial occupations of women in the environment of Montreal during the period of the war, 1914–1918. (A thesis for the degree of master of arts, McGill University.) Montreal, The Canadian Reconstruction Association, 1919. 86 pp.*

Sets forth the results of a personal investigation into the changes brought about by the war in the industrial activities of women in and near Montreal, and the comparative views and opinions of the employers regarding changed conditions in their respective industries and the future outlook for women.

SOCIÉTÉ COOPÉRATIVE SUISSE DE CONSOMMATION DE GENÈVE. *La Coopération à Genève et en Suisse. Geneva, 1918. 158 pp. Chart.*

An account of the 50-years' development of the Swiss Consumers' Cooperative Society of Geneva, Switzerland. The society now has 22,852 members; its sales for 1918 amounted to 11,120,931 francs ($2,146,341, par), and the sum of 722,945 francs ($139,528, par) was returned as a dividend on sales.

UNION LABOR DIRECTORY. *Chicago and vicinity. Architects, builders, contractors' guide. (Formerly Macdonald's.) Fifteenth edition. Chicago, 154 West Randolph Street [1920]. 160 pp.*

Contains official wage scales of the building trades-unions for 1920.

VALDOUR, JACQUES. *L'ouvrier agricole. Observations vécues. Paris, Arthur Rousseau, éditeur, 1919. 309 pp.*

This volume is one of a series of labor studies which together are planned to present a fairly comprehensive picture of labor conditions in France in the first part of the twentieth century. This study, which covered three Provinces, deals with the working conditions of persons employed in harvesting hay and grain and in gathering grapes, and also with the material details of their lives, their habits, language, morality, and political or religious ideas.

YOUNG, ARTHUR H. *Industrial cooperation. An address presented at the twenty-sixth annual convention, National Implement and Vehicle Association, Chicago, October 16, 1919. Chicago, National Implement and Vehicle Association, 72 West Adams Street, 1919. 11 pp.*

Sets forth the aims, methods, and results of the Harvester industrial council plan.

SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

[*The publication of the annual and special reports and of the bimonthly bulletin was discontinued in July, 1912, and since that time a bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These bulletins are numbered consecutively, beginning with No. 101, and up to No. 236; they also carry consecutive numbers under each series. Beginning with No. 237 the serial numbering has been discontinued. A list of the series is given below. Under each is grouped all the bulletins which contain material relating to the subject matter of that series. A list of the reports and bulletins of the Bureau issued prior to July 1, 1912, will be furnished on application. The bulletins marked thus * are out of print.*]

Wholesale Prices.

* Bul. 114. Wholesale prices, 1890 to 1912.
Bul. 149. Wholesale prices, 1890 to 1913.
* Bul. 173. Index numbers of wholesale prices in the United States and foreign countries.
Bul. 181. Wholesale prices, 1890 to 1914.
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